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FIFTY-SIXTH ANNUAL REPORT

OF THE

BOARD OF EDUCATION:

TOGETHER WITH THE

FIFTY-SIXTH ANNUAL REPORT

OF THE

SECRETARY OF THE BOARD,

1891-92.

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**JANUARY, 1893.**

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# STATE BOARD OF EDUCATION, 1893.

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## EX OFFICIO.

HIS EXCELLENCY WILLIAM E. RUSSELL, *Governor.*

HIS HONOR ROGER WOLCOTT, *Lieutenant-Governor.*

## BY APPOINTMENT.

ALONZO A. MINER,	Boston,	May 25, 1893.
ALICE FREEMAN PALMER,	Cambridge,	May 25, 1894.
ADMIRAL P. STONE,	Springfield,	May 25, 1895.
KATE GANNETT WELLS,	Boston,	May 25, 1896.
MILTON B. WHITNEY,	Westfield,	May 25, 1897.
GEORGE I. ALDRICH,	Newtonville,	May 25, 1898.
ELMER H. CAPEN,	Somerville,	May 25, 1899.
ELIJAH B. STODDARD,	Worcester,	May 25, 1900.

## SECRETARY.

JOHN W. DICKINSON, *Newton.*

## ASSISTANT SECRETARY AND TREASURER.

C. B. TILLINGHAST, *Boston.*

## AGENTS.

GEORGE A. WALTON,	West Newton.
JOHN T. PRINCE,	West Newton.
ANDREW W. EDSON,	Worcester.
G. T. FLETCHER,	Northampton.
JAMES W. MACDONALD,	Stoneham.

## AGENT FOR THE PROMOTION OF INDUSTRIAL DRAWING.

HENRY T. BAILEY, *North Scituate.*

## ASSISTANT FOR WESTERN COUNTIES.

L. WALTER SARGENT, *Pittsfield.*



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ANNUAL REPORT

OF THE

BOARD OF EDUCATION.

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## ANNUAL REPORT.

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In submitting to the General Court its fifty-sixth annual report, the Board of Education would congratulate the Commonwealth on the firm anchorage of our public school system in the patriotic instincts of the great majority of our citizens. This is shown in many ways. The intensified watchfulness over our school interests, in almost every section of the country, bears testimony to the common conviction that they hold vital relation to all our free institutions and to the perpetuity of our government.

The numerous voluntary and associated efforts to discover what is most essential in both matter and method in teaching are auguries of vast moment for the future of education. Reference is had not simply to conventions of teachers in towns, counties, States and the nation, but to teachers' clubs, conferences of classes of teachers, as grammar masters, high school teachers, normal teachers, superintendents of schools, and other local movements. These show that the working forces in our schools are neither mere legal functionaries, on the one hand, nor eye-servants on the other, but, over and above being servants of the government, they are devotees of human welfare.

### LIVING FORCES.

May we not assume that in such facts we have an exhibition of some of the living forces of the government itself? Under the quiet and unostentatious labors of the Board, through its secretary, numerous springs of wise action are set in motion all over the State. The sinews of war have been freely supplied. The State, from the school fund and its treasury, and the cities and towns, by voluntary taxation, have spent more

money on the public schools during the past year than ever before in any single year, — amounting to over \$9,000,000. It has continued its helpful influence in multiplying district superintendents, that the counsel of skilled teachers may be everywhere available to those less experienced. The number of district superintendents now employed in the State is 42; the number of small towns now organized into superintendent districts is 124; the number of schools embraced in these districts is 1,410. Nearly 80 per cent. of all our public schools, numbering 7,336, are now under trained supervision either by city and town supervisors or by district superintendents. About 85 per cent. of our 383,217 school children of all ages are in these schools. The number of teachers required in our schools is 9,486; the number of different teachers employed is 10,965, of whom 992 are men and 9,973 are women. Such are among the facts that give an encouraging outlook to our public school interests.

#### AGENTS OF THE BOARD.

But there are subsidiary helps of great importance which ought to be mentioned. One of the most important of these is the six agents employed by the Board. These visit all parts of the State, but devote more especial attention to those portions which are yet without superintendence, or where the superintendence is relatively less satisfactory. These agents visit schools, observe the manner of teaching, make helpful and sympathetic suggestions to the teachers, counsel the local committees, suggest such improvements in the environment of the schools as seem practicable, and often give public lectures to teachers, local committees and the general public. This is done in a way so helpful and genial that the coming of the agents is hailed as a boon.

Mr. George H. Martin resigned his place on the list of agents at the close of the year, and Mr. J. W. MacDonald, principal of the high school in Stoneham, has been chosen to fill the vacancy. Mr. Martin has served the Commonwealth with marked acceptance for ten years.

It has been found expedient to employ another agent to assist teachers in the more remote portions of the State in the intro-

duction of drawing into their schools; in conformity to the requisition of the laws. This position has for the present been assigned to Mr. L. W. Sargent.

#### TEACHERS' INSTITUTES.

Of kindred importance with the work of the agents is the service rendered by the teachers' institutes. Arrangements for these are made by the agents of the Board in such localities as are found convenient, and the teachers of such localities, with those of surrounding towns, who are usually granted a recess for the purpose, come together, commonly for a day and evening, to be specifically instructed in methods. The secretary of the Board, an acknowledged and unrivalled specialist, calls to his aid one or more of the agents and other distinguished teachers, to each of whom is assigned the work in which he is strongest. This method of conducting the institutes is relatively inexpensive and is eminently serviceable. The number of institutes held during the past year was 25; and it is safe to say that the teachers who attended them, whatever may have been their grade of attainments, bore away with them a positive inspiration that lifted them to a higher plane of conception and effort. Nor were teachers alone benefited. Superintendents, school committees, and the people gain new views of our school aims, and are prepared to give them a more unreserved and hearty support.

#### NORMAL SCHOOLS.

The foregoing are among the varied helps to extend the work of our normal schools. These schools themselves are increasing in patronage corresponding to their greatly improved accommodations. The dedication of the new normal school building at Westfield adds another fine edifice to those recently provided for Framingham and Bridgewater. All our normal schools may now be said to be well housed except Salem, and no doubt its needs will be attended to as soon as some satisfactory method of caring for the school *ad interim* can be devised.

These schools are greatly aided by the establishment of practice schools, with which Framingham, Bridgewater and Westfield are well provided, and in place of which Worcester maintains the apprentice system, pupils gaining experience by

teaching in the public schools of the city under the eye of the regular teachers. Application by the normal pupils of the principles and methods in which they have been taught, under the eye of an experienced critic, even for a few months, must be far more valuable than years of hap-hazard experience without such training. Of our present corps of teachers in the State, 4,059 have attended normal schools, including 3,267 of their graduates.

With all the advance that has been made in our methods of teaching,—and it is by no means inconsiderable,—much remains to be done. More than half of our schools are still led by untrained and incompetent teachers. Excellent in character, noble in purpose, commendable in effort, they yet lack just that adaptation which the normal school and other helps can give them. The State cannot afford to relax its efforts till every school-room shall be under the guidance of a teacher possessed of both knowledge and skill. To this end the interests of our normal schools may be in several respects advanced. Higher attainments for admission, which may involve greater average age of pupils; higher salaries to teachers, especially in the subordinate departments, which may command the labors of abler and more experienced persons; and more rigid tests in passing pupils from one grade to another, involving perhaps, as may also the raising of the standard of admission, more of concert of action between the schools.

### RESULTS.

The various instrumentalities thus mentioned—the normal schools, the agents, the supervisors and superintendents, the institutes, and increased parental vigilance,—all together can hardly fail to have produced, and to continue to produce, marked results for good in our public schools. In the first place, a better quality of teachers is coming to be demanded; better means of teaching are being supplied; better methods of teaching are coming into use, and improved courses of study are being introduced. In the next place, there is an increased attendance upon the schools, keeping the ratio of attendance of children of school age fully up to the ratio of increase of population. There is also increased interest in the support of the

schools, indicated by the greater outlay of the past year already mentioned, and especially in the noticeable improvement in school buildings, to which the towns are now giving more generous attention, incited thereto, it may be, by the liberal example of the State itself.

#### NATURE STUDIES.

The attention of educators has of late been called to the importance of cultivating more largely the observing powers of children. This is done by the definite study of natural objects, such as minerals, plants and animals. A great advantage in such a field of inquiry is that its objects are always at hand, are presented in concrete forms and are easily grasped, while abstract ideas, or things unseen, may largely escape. Not only are children thus initiated into the rudiments of natural science and prepared for further scientific study, but their minds are stored with clear ideas, laying a foundation for the broader and safer exercise of the imagination, and opening the way to greater possibilities in lines of abstract thinking. Nor are such studies destitute of moral influence. In the works of God, the wonders that everywhere confront the child awaken the most profound reverence for the divine perfections, and deeply impress one with the importance of conforming to the divine law. In all our training of teachers for the most elementary work of the school-room, these principles should be kept in view. A few simple pieces of apparatus, among which the microscope should hold a prominent place, would enable the elementary teacher to open a new world to her wondering pupils.

#### MANUAL TRAINING.

This subject is commanding more and more public attention, and winning its way more and more into our public school work. Manual training is by no means foreign to a general education. It begins in the nursery, is extended in the home, is involved in the sports of the playground, and is only more definitely entered upon in the earlier labors of the home, the workshop and the farm.

As an element of school training it finds its foundation in drawing and modelling in clay. All freehand work cultivates



the powers of observation and execution, especially when the execution is from the objects themselves rather than from copies of those objects. To this extent manual training is practicable in all our schools, however restricted in numbers or limited in resources.

In larger populations, possessed of ampler resources, much more is undoubtedly possible. The efforts tentatively put forth in various quarters apparently promise well, and if in the long run their promise shall be fulfilled, a new element of permanent interest will have entered into our schools. Most young persons prefer the definite manipulations of visible material to the vague wrestlings with intellectual themes. While the former have a specific value of their own, they have a still higher value as a means of intellectual training, opening the way to the success of the latter efforts.

The still more extended arrangements for manual training introduced into some of our secondary schools, of which the Rindge school at Cambridge is a notable example, ally such schools closely to strictly technical schools, and make them properly preparatory thereto. How far such schools will multiply in our more populous communities may depend on the number of persons of large resources who may be desirous of directing the ambition of our youth into such channels.

#### INSTRUCTION IN THE ENGLISH LANGUAGE.

There is one subject of great moment, to which the Board would call the attention of our local school authorities; viz., the enforcement of the law requiring all our youth to be instructed in the English language. In our public schools the law in this regard is universally obeyed. The same is true in the vast majority of our private schools; but there are a few exceptions, and such examples should not be allowed to become chronic. English is the language of our government, of our laws, of our business and of our social life. Men of science and of the professions may use whatever language they like; but the nation cannot become homogeneous, cannot breathe a common atmosphere, cannot feel the pulses of a common life, save on the condition of speaking a common tongue.

It is a matter of grave apprehension that so large a portion



of our children of school age (in parochial schools 10.6 per cent., and in other private schools 2.4, making 13 per cent. in all) should be drawn away from our public schools to be reared in private schools. Saying nothing of the motives which lead thereto, the mere fact of separate education, especially when promoted by the affluent, tends to the rearing of castes, the creating of a gulf between the rich and the poor, and the laying of foundations for the continuance of those labor troubles that are convulsing this whole land.

Great as these mischiefs inevitably are, they will be indefinitely enhanced should we remain a polyglot nation. Language is the great unifier. Separate languages mean separate historical training, separate or diverse traditions, and both social and sectional clashings. Without a common language we cannot become a nation. Without the execution of our school laws we cannot attain to a common language, or at least such attainment will be indefinitely delayed.

In respect to our educational exhibition next year at Chicago, the Board regrets that it has very little that is satisfactory to report. After the expenditure of not a little means in preparation therefor by our State commission and its adjuncts, we are confronted with the fact that as yet sufficient space has not been allotted us in any existing building, and no site is available within the grounds or within reasonable distance of the grounds on which our State can erect a suitable building should it so desire. It may be that we shall be compelled to make our exhibit in our own city, and invite hither the world in its journeyings to and fro.

A. A. MINER,  
*for the Board.*

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IN BOARD OF EDUCATION, Dec. 1, 1892.

Approved and adopted as the report of the Board.

WILLIAM E. RUSSELL, *Chairman.*  
C. B. TILLINGHAST, *Clerk.*

BOSTON, Dec. 31, 1892.



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REPORTS OF VISITORS

OF THE

NORMAL SCHOOLS.

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## STATE NORMAL SCHOOL, BRIDGEWATER.

ALBERT G. BOYDEN, PRINCIPAL.

## INSTRUCTORS.

ALBERT GARDNER BOYDEN, A.M., Educational Study of Man, including the Study of the Body, of the Mind, Science and Art of Teaching, School Organization, School Government, School Laws of Massachusetts and History of Education; FRANZ HEINRICH KIRMAYER, Latin, Greek, French, German; ARTHUR CLARKE BOYDEN, A.M., Chemistry, Mineralogy, Zoölogy, Geology, History and Civil Polity; WILLIAM DUNHAM JACKSON, Botany, Physics, English Literature, Advanced Algebra and Geometry; FRANK FULLER MURDOCK, Geography, Physiology and Hygiene, Physical Training; HARLAN PAGE SHAW, Physical Science, Industrial Laboratory; FRANK ELLIS GURNEY, Classics, Astronomy; ISABELLA SARA HORNE, Vocal Culture and Reading; CLARA COFFIN PRINCE, Vocal Music, Algebra, Geometry; FANNIE AMANDA COMSTOCK, Arithmetic, Rhetoric; EMMA CURTIS FISHER, Elementary English, Grammar, Geometry; ELIZABETH HELEN PERRY, Drawing; Model School, LILLIAN ANDERSON HICKS, Principal, CHARLOTTE LOUISE VOIGT, MARTHA WILLIAMS ALDEN, FLORA MAY STUART, ALICE WORMWOOD.

Enlarged opportunities and increased numbers mark the year now ended at Bridgewater. The new building is well adapted to its purpose, and gives the teachers fresh zeal, and the students much needed room.

No changes have occurred in the corps of instructors during the year. At its beginning Mr. Gurney and Mr. Shaw were appointed junior instructors, with good results in the grading of classes in Latin and French, and the freeing of half Mr. Murdock's time for physical training. The gymnasium has been supplied with good apparatus, and the time has come when added assistance must be found in directing students' work in this department.

The course in the industrial laboratory has been improved, and the sum of eight hundred dollars has been spent for scientific apparatus. The physical lecture room has been provided with shutters for instantly darkening the room, and with additional tables for individual experiments.

The two boarding-halls have been full throughout the year, and numbers of students have been obliged to find rooms outside the buildings.

The statistics for the school year ending Aug. 31, 1892, are as follows :—

TERMS BEGAN SEPT. 9, 1891, AND FEB. 10, 1892.	FIRST TERM.			SECOND TERM.			FOR THE YEAR.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Members, . . .	49	185	234	48	189	237	53	209	262
Entering classes, . .	14	79	93	4	23	27	18	102	120
Graduates, . . .	2	12	14	11	42	53	13	54	67

The whole number of students who have been members of the school is 3,801,—1,137 men, 2,664 women.

The number who have received certificates or diplomas is 2,332,—723 men, 1,609 women.

Of the 262 members of the school for this year, Plymouth County sent 85; Norfolk, 55; Middlesex, 26; Bristol, 21; Barnstable, 16; Essex, 11; Suffolk, 7; Worcester, 5; Franklin, 4; Hampshire and Nantucket, 2 each; Berkshire, 1; the State of New Hampshire, 16; Vermont, 4; Maine, 3; Connecticut, 1; New York, 1; Rhode Island, 1; and Jamaica, W. I., 1. Total from Massachusetts, 12 counties and 89 towns, 235; other States and countries, 27.

The number of students during the year pursuing the special course has been 2; the four years' course, 88,—36 men, 52 women; the number in the intermediate course, 9; in the two years' course, 167.

The distribution of the students the first term was as follows: special course, 2; four years' course, 83; intermediate course, 6; two years' course, senior class, 15; sub-senior class, 39; ex-junior class, 16; junior class, 73. The distribution during the second term: special course, 2; four years' course, 78; intermediate course, 9; two years' course, senior class, 43; sub-senior class, 13; ex-junior class, 69; junior class, 23.

The average age of those admitted during the year was 18 years 10 months; of the men, 18 years 9 months; of the women, 18 years 10 months.

Of the 120 admitted, 1 came from college, 5 from normal schools, 98 from high schools (80 graduates, 18 under-graduates), 5 from grammar schools, 11 from academies and private schools; of these, 22 had taught.

The occupations of the fathers of those admitted were given as follows: mechanics, 40; farmers, 20; merchants and traders, 18; teachers and professional men, 12; manufacturers, 5; laborers, 3; seamen, 3; miscellaneous, 10; not given, 9.

Of the 120 pupils admitted during the year, Bridgewater sent 8; Brockton, 7; Abington and Fall River, 6 each; Braintree and Milton, 4 each; Easton,

Holbrook, Plymouth and Weymouth, 3 each ; Attleborough, Brighton, Cambridge, Dedham, East Bridgewater, Hingham, Medway, Nantucket, Provincetown, Quincy, Salem, Stoughton and Waltham, 2 each ; Andover, Athol, Boston, Bourne, Brewster, Conway, Fairhaven, Freetown, Gloucester, Greenfield, Halifax, Kingston, Lawrence, Marblehead, Matfield, Merrimac, Natick, Norwood, Rochester, Rockland, Roxbury, Somerville, Stoneham, Taunton, Tewksbury, Watertown, Wellesley, Wellfleet, Westfield, Westport, Whitman, Winchester, Woburn, Wrentham and Yarmouth, 1 each ; New Hampshire, 10 ; Vermont, 1 ; Jamaica, 1.

ALICE FREEMAN PALMER.  
GEORGE I. ALDRICH.

## STATE NORMAL SCHOOL, FRAMINGHAM.

Miss ELLEN HYDE, PRINCIPAL.

## INSTRUCTORS.

ELLEN HYDE, Psychology, Principles and Methods of Teaching; AMELIA DAVIS, Mathematics and Astronomy; SUSAN J. HART, Natural Sciences; M. ELIZABETH HOLBROOK, Latin and Geography and English; SARAH E. PRATT, Physics, Geography, History of Education and Latin; CELESTE E. BUSH, History, Civil Polity; LILLIAN ORDWAY, English Language and Literature; ADELIA M. PARKER, Critic of Teaching; MARY E. TRASK, Critic of Teaching; AUGUSTA BARBER, Practice School, Primary Department and Critic of Teaching; J. ANGELINE SMITH, Practice School, Grammar Department; NELLIE A. DALE, Practice School, Intermediate Department; HARRIET L. LACY, Drawing; JANE E. IRESON, Elocution; W. S. TILDEN, Singing; MARY H. STEVENS, French; ANNA J. BRADLEY, Sloyd; HENRIETTA S. GRAVES, Assistant in Science.

The school year has been one of prosperity and harmony. The methods of school work and discipline are marked by breadth, thoroughness and fairness. The principal and faculty are thoroughly devoted to their work, and eager for the constant advancement of the school.

We have had but one case of severe illness, that of typhoid fever, contracted elsewhere; but, owing to the perfect sanitary arrangements of Crocker Hall and the watchful supervision of Miss Beach, the patient recovered and no one else took the fever.

The most important event of the year, and one which we deeply regret, was the resignation of Miss Ellen A. Williams, who for fifteen years has been at the head of the practice school. Her management of it has been rarely admirable, and her criticisms of the "pupil teachers" has been marked by discernment, fairness and sympathy. She has given her strength, time and heart, without reserve, to the school, thus enabling it to become a model for other schools, and inspiring her associates with her own spirit and methods. Yet the yearly and daily strain was heavy, and she felt it best for herself that



she should teach in less arduous manner for a while. Instead of appointing another principal in the practice school, it was deemed wiser to make each teacher more directly responsible to Miss Hyde, at the same time giving to each one more personal responsibility. Mrs. Adelia M. Parker has been engaged as teacher in the practice school.

Other changes have moreover occurred in the faculty. Miss Cornwell resigned to accept a position in the Roxbury high school, Miss Lillian Ordway has been engaged as teacher of English, Miss Henrietta S. Graves of chemistry, and Miss Anna J. Bradley, a graduate of the Laarson Sloyd school, as teacher of Sloyd in the practice school.

More lectures and addresses than usual have been kindly given to the school, all but two being free gifts. Mr. J. T. Prince lectured on "German Schools;" Mr. H. T. Bailey on "Color;" Mrs. Mary A. Livermore on "Wendell Phillips;" Mr. Edwin D. Mead on "History;" Mrs. Lillie C. Wyman on the "Grimké Sisters;" Miss Austin on her experiences as a teacher in the South; Mrs. Kate Tryon on "Birds;" Mrs. Maria Bray on "Ferns;" Miss Daniels on "Hygienic Cooking;" Prof. W. T. Sedgwick on "Causes of Disease;" Judge Kingsbury on "The Mechanism of Courts;" Miss Porter on "Personal Experiences in Egypt." Dr. L. H. Palmer gave two emergency lectures. Mr. Booker T. Washington, with his quartette of colored singers from the Tuskegee normal school, visited the school, making an eloquent address and giving it some delightful music.

In the spring Mrs. Wells invited the graduating class to visit with her the normal school at Worcester. There Hon. E. B. Stoddard, chairman of the Worcester normal school, met the party and escorted it in carriages to the school, and at noon gave the guests and the Worcester graduating class and the faculty a delightful collation. Such visits, apart from their social value, are productive of much educational benefit.

Fortunately but few improvements have been necessary in the school buildings at Framingham. Crocker Hall was painted within and without; stand-pipes and hose were placed in May, Crocker and Normal halls; a bank wall was built around the back of May Hall; the sewage field fenced in, and apple trees, currant bushes and grape vines planted.

The walls of the buildings have been made beautiful by various gifts. A fine large colored photograph of the entrance to the "Garden of the Gods" was purchased with fifty dollars, a gift of Mrs. Tibbetts of the class of July, 1872; an etching of Charles Darwin was presented by the class of June, 1891; and two smaller photographs by Miss M. P. Valentine of the class of July, 1886. From Mrs. Maria Bray was received the most valuable gift of her large and rare collection of ferns.

The following statistics have been prepared by Miss Hyde, for 1891-92:—

Admitted September, 1891, 67; February, 1892, 10; total, 77.

Graduated, January, 1892, 12; June, 1892, 26; total, 38.

Number admitted from high schools and academies, September, 1891, 59; February, 1892, 7; whole number, 66.

Number admitted graduates of high schools, September, 1891, 43; February, 1892, 4; whole number, 47.

From normal schools, 2; graduate of normal school, 1.

Average age of those admitted, September, 1891, 19 years 2 months; February, 1892, 20 years 6 months.

Number who have taught, September, 1891, 17; February, 1892, 1; whole number, 18.

Occupation of parents: Farmers and gardeners, 43; mechanics (of all kinds), 49; merchants (of all grades), 27; manufacturers, 7; professional, 10; brokers, real estate and insurance agents, 5; railroad men, superintendents, conductors, ticket agents, 7; unskilled laborers, 6; unknown, 5; total, 159.

Residence of pupils: Massachusetts,—Barnstable County, 1; Berkshire County, 1; Bristol County, 2; Dukes County, 1; Essex County, 8; Franklin County, 2; Middlesex County, 55; Norfolk County, 16; Plymouth County, 1; Suffolk County, 2; Worcester County, 40,—129. Other States,—Connecticut, 4; Indiana, 1; Iowa, 1; Maine, 4; Maryland, 1; New Hampshire, 13; New York, 2; Pennsylvania, 3; Vermont, 1,—30; total, 159.

KATE GANNETT WELLS.

A. A. MINER.

## STATE NORMAL SCHOOL, SALEM.

DANIEL B. HAGAR, PRINCIPAL.

## INSTRUCTORS.

DANIEL B. HAGAR, A.M., Ph. D., Psychology Applied to Principles and Methods of Teaching, School Management, History of Education, School Laws of Massachusetts, Civil Government, Advanced Latin, Book-keeping, Vocal Music, and General Exercises; ELLEN M. DODGE, Mental Philosophy, English Literature, and German; CAROLINE J. COLE, English Literature, General History, Astronomy, Geography, and English Composition; SOPHIA O. DRIVER, Latin, English Grammar, Advanced Geometry, and Geology; HARRIET L. MARTIN, Algebra, Geometry, Advanced Arithmetic, and English Composition; E. ADELAIDE TOWLE, Physiology, Object Lessons, and English Composition; MARY E. GODDEN, English Grammar, United States History, and English Composition; HARRIET D. ALLEN, Reading, Elocution, English Composition, and School Records; ABBIE E. RICHARDS, Arithmetic, Geography, and English Composition; M. JEANNETTE BROOKINGS, Arithmetic, Geography, and Penmanship; MARY S. KEENE, Botany, French and English Composition; CHARLES E. ADAMS, Physics and Chemistry; CHARLES F. WHITNEY, Drawing.

The Salem school has enjoyed its usual prosperity, as the statistics printed below clearly indicate. This school has long been an efficient instrument in the preparation of teachers. Its opportunities for usefulness are as great as they have ever been; but in order that these opportunities may be availed of to their full extent, it is important that a new building should be erected, with such facilities as the present methods of teaching require. In many respects the present building is antiquated and unsuitable. The room for pupils is inadequate. The school has outgrown its present quarters. The stairways are narrow, crooked, and, on the public occasions that attract large numbers of visitors, really dangerous. Both ventilation and light are poor, and the sanitary arrangements are not up to modern demands. The lot on which the present building stands is circumscribed, rendering modification and enlarge-

ment impracticable. There seems, therefore, but one way out of the difficulty which the situation presents, namely, to purchase a new lot and erect a new building that will meet the necessities of the present and immediate future. The visitors of the Salem school earnestly recommend this course.

The statistics of the school are as follows : —

1. The whole number of pupils belonging to the school during the year was 260. Of this number, Essex County sent 151; Middlesex, 52; Suffolk, 7; Norfolk, 4; Bristol, Barnstable, Plymouth and Worcester, 1 each. The State of Maine sent 4; New Hampshire, 29; Vermont, 5; Connecticut, Florida and Louisiana, and the District of Columbia, 1 each.

2. The number present during the year which closed Jan. 19, 1892, was 221; the number during the term which closed June 28, 1892, was 190. The whole number of pupils in the school since its opening in September, 1854, is 3,808.

3. The number graduated from the regular course Jan. 19, 1892, was 34; the number graduated from the same course June 28, 1892, was 43. The whole number of graduates of the seventy-two classes is 1,904. The number graduated from the advanced course, June 28, 1892, was 6.

4. The number that entered the school Sept. 1, 1891, was 64; the number that entered Feb. 9, 1892, was 37.

5. The average age of the class admitted Sept. 1, 1891, was 18.33 years; of the class admitted Feb. 9, 1892, 18.49 years.

6. Of the 64 pupils admitted in September, 1891, 1 came from a normal school, 43 from high schools (35 graduates, 8 undergraduates), 6 from grammar schools, 6 from academies, 5 from district schools, and 3 from private schools. Of the 37 admitted in February, 1892, 23 came from high schools (11 graduates, 12 undergraduates), 5 from grammar schools, 3 from academies, 2 from district schools, 3 from private schools, and 1 from a model school.

7. The fathers of the 101 pupils admitted during the year are by occupation as follows: mechanics, 26; farmers, 15; merchants, 9; manufacturers, 6; professional men, 2; miscellaneous, 39. The occupations of 3 are unknown, and 1 has no occupation.

8. Of the class admitted in September, 1891, 13 had taught school; of the class admitted in February, 1892, 10 had taught.

9. The number of pupils connected with each of the classes during the first term of the year was as follows: special students, 2; advanced class, 14; class A (senior), 46; class B, 54; class C, 32; class D, 73. The number during the second term was: special student, 1; advanced class, 13; class A (senior), 48; class B, 29; class C, 55; class D, 44.

10. Of the 101 pupils admitted during the year, Lawrence sent 9; Andover, 6; Somerville, 5; Salem, Gloucester and Marblehead, 4 each; Danvers, Lynn, Medford, Middleton and Peabody, 3 each; Beverly, Boston, Hamilton, Lowell, Manchester, Melrose, Reading and Topsfield, 2 each; Amesbury, Bradford, Cambridge, Chelsea, Dorchester, Georgetown, Groveland, Ipswich, Merrimac, Needham, Rockland, Stoneham, Swampscott,

Tewksbury, Townsend, Wakefield and Winthrop, 1 each; Maine sent 2; New Hampshire, 13; Vermont, 4; Louisiana and the District of Columbia, 1 each.

11. During the year 52 books were added to the general library, — 33 by gift, 19 by purchase. The text-book library was increased by the purchase of 208 books.

ELMER H. CAPEN,  
GEORGE I. ALDRICH,

*Visitors.*

SALEM, Dec. 31, 1892.



## STATE NORMAL SCHOOL, WESTFIELD.

JAMES C. GREENOUGH, PRINCIPAL.

## INSTRUCTORS.

Normal School: JAMES C. GREENOUGH, A.M., Principal, Psychology, Didactics, Civil Polity, Rhetoric; FREDERICK W. STAEBNER, Physiology, Zoölogy, Geology, Mineralogy, Geography, Botany, German; FRANK W. SMITH, A.M., Latin, General History; A. C. LONGDEN, A.M., Physics, Chemistry, Arithmetic, Trigonometry and Surveying, Composition; ELVIRA CARVER, Geography, English Literature, Algebra; LAURA C. HARDING, Geometry, Astronomy, Book-keeping, Reading, Vocal Music, French, Composition; FRANCES C. GAYLORD, Geometry, Grammar, History, Composition; ANNIE N. SINCLAIR, Drawing, Penmanship; FLORA WHITE, Gymnastics, Sloyd. Training School: ISABEL W. GLADWIN, Intermediate Department; EUNICE M. BEEBE, Primary Department; LOUISE M. STEINWEG, Kindergarten.

The last year has been one of persistent, earnest work and successful advance. There has been no change of teachers in the normal departments. Miss Isabel W. Gladwin, who graduated from the Westfield normal school in 1888, and who has since taught in Turner's Falls and in the city of Newton, has charge of the intermediate grades of the training school. She is ably discharging the duties of the position. Miss Louise M. Steinweg, a graduate of the Fræbel Kindergarten College, Hamburg, has had charge of the kindergarten since March 1, 1892. German thoroughness is manifest in her work.

The event of greatest importance this year has been the completion and occupation of the new school building, which is admirably adapted in its arrangement and in all its appointments to normal school work. It furnishes ample accommodation for 175 normal students and about 125 additional pupils in the training department.

The architects, Messrs. Hartwell & Richardson of Boston, are entitled to much credit for the originality of the plan and for their faithful efforts in securing excellence and thoroughness

in all the work. Messrs. Darling Bros. of Worcester, Mass., were the contractors for the foundation, which was of solid Monson granite, and for the mason and wood work, including all the cases, laboratory, other tables and other inside furnishings. The Phillips Manufacturing Company of Springfield, Mass., were contractors for the heating and ventilating apparatus, which was put in under the personal superintendence of John H. Mills, Esq., whose plan of heating and ventilating was adopted. Messrs. H. O. Sprague & Son of Westfield, Mass., were contractors for the plumbing: G. S. Perry, Esq., of Boston, furnished the slate black-boards; Messrs. Quinnell & Cushing of Springfield, Mass., the gas fixtures, and A. G. Whitcomb, Esq., of Boston, the desks and most of the chairs.

A personal inspection of the building furnishes evidence of the excellence of the materials used and the thoroughness with which all the work has been done.

The last report of the school contains a description of the interior of the building and the arrangement of the different rooms. It is fully equipped with the most approved appliances and apparatus for teaching, especially in the physical and chemical departments, and is in all respects a model school building.

The land upon which the building stands comprises about two acres, extending from Court to King Street, and was purchased at a cost of \$11,500. A circular asphalt driveway has been constructed from Court Street to the two front entrances of the building, and a concrete walk across the grounds, from King Street, thus furnishing convenient access to the school building through both streets. The grounds furnish suitable space in the rear of the building—a possession never before enjoyed by this school—for out-door exercise.

The land was purchased and the school building was erected and furnished and all the walks constructed within the appropriation, but the balance did not prove sufficient to fully complete the filling and grading of the ground. We shall need a special appropriation for the completion of this work and the erection of suitable fences upon the easterly and westerly sides of the lot.

The building committee have given much time and attention to the work during its entire progress, for the purpose of



securing the most economical expenditure of the appropriation, and take an honorable pride in the results achieved.

Although not then fully completed, the building was occupied by the normal pupils on April 18; the primary school under Miss Beebe and the kindergarten under Miss Steinweg occupied their rooms a few weeks earlier.

The dedicatory exercises took place at the close of the summer term, June 21. Graduates and former students of the school, who constitute the Normal Association, took part in these exercises. After a brief address, closing with words of welcome, by Hon. M. B. Whitney, chairman of the building committee, Rev. A. J. Dyer of North Brookfield, on behalf of the members of the association, replied. A. P. Stone, LL. D., presented the report of the building committee. This was followed by a paper upon "The Province of the Normal School," by Secretary Dickinson. The dedicatory address was delivered by Edwin D. Mead, president of the Old South Historical Society, Boston; his theme was "The Study of History." Brief addresses were also made by Mrs. Kate Gannett Wells, a member of the Board of Education; by Robert H. Kneil, chairman of the school committee of Westfield; by Agent G. A. Walton, by Principal Greenough and by W. S. Douglass, member of the House of Representatives and of the committee on education at the time the appropriation for the building was made. The exercises closed with prayer and benediction by Rev. L. H. Blake of Westfield.

At one o'clock, members of the Board of Education, invited guests and members of the Normal Association, partook of a generous collation in the hall of the old normal school building. The afternoon was devoted to the triennial exercises of the association. It was a glad occasion, and if our limits allowed we would most willingly speak of the several exercises.

While the new building marks an era in the history of the school, to the old building will cling the associations of those who there gained knowledge and there developed power to teach. After giving due credit to the members of the Board of Education, and to the Legislature, and to all others who directly labored to secure the new building, it must be granted that the good work of those teachers who were taught and trained in the old building was a powerful factor in obtaining

the appropriation for a new site and a new building. When the passage of the resolve was under discussion, the testimony of gentlemen from different parts of the State was unanimous in affirming the marked excellence of teachers who had prepared for their work in the Westfield school. The new building, with all its admirable adaptations to the work of the school, is, in an important sense, a memorial of the skill, the enthusiasm and the faithfulness of the graduates of the school, as well as of the liberality of the State.

The principal, while attending teachers' institutes in the western part of the State, during the autumn, made inquiry of members of school committees and others respecting the success of the Westfield normal graduates as teachers. The replies were, that thoroughly trained teachers are prized. The wages of teachers in many communities are so low that there is not sufficient pecuniary inducement to prepare for teaching by a course of professional study and training. The great need in many communities is that of thoroughly trained teachers. To make the normal school more effective in helping those schools of the State that most need help, the school should in a sense be brought nearer the homes of those students who find it difficult to bear the expense incurred in attending the normal school. This can be done, as we have urged in former reports, by a judicious system of mileage. A limited appropriation by the State, practically overcoming the disadvantage of distance from the school, is a matter of justice to those living beyond the limits of Westfield, who wish to fit for teaching in the public schools. A normal school cannot be maintained in every city and town; but by a system of mileage the normal school may be as freely accessible to those coming from the remotest town in Franklin or Berkshire counties as to those from Westfield. Simple justice demands that as far as may be those desiring to teach in our public schools and striving to fit themselves for the work should have equal opportunities, in whatever part of the State they may live. A system of mileage would tend to render unnecessary the often unsatisfactory attempt to supply trained teachers by means of local training schools. Such schools cannot afford any proper equivalent for the advantages of a good normal and training school, nor do those who maintain them claim that they can. The expense of attending a distant nor-

mal school is very frequently urged as a reason for substituting the meager course of the training school for the full course of the normal school. This expense should be lessened by allowing mileage to students in proportion to the distance of their homes from the school.

The class that entered in September last was large and well qualified to take up the work of the school. The Westfield school justly opens its doors to those who have made the best use of the schools in their towns, even if such candidates are not as well prepared as those who come from towns in which there are good high schools. The smaller towns especially need that aid in their school work which the normal school is adapted to render, and this aid is best rendered through those who complete a course at the normal school and then return to their homes in these towns and there teach. Some of these, as they prove their ability in the school-room, will be drawn by larger salaries to cities and larger towns; but many will prefer to remain as teachers in the immediate vicinity of their homes. By referring to the general catalogue of our graduates, it will be seen that many of those whose early homes were in the smaller towns have served longest and most ably as teachers.

As the several grades of the training department are now in the same building with the other departments of the Westfield school, there is excellent opportunity for the students to observe the work of these grades, and by practice to gain skill in teaching. The laws of the mind upon which, as principles, all good teaching depends, are brought to the notice of every student, and he is led to apply them in his own teaching. In this way the study of the method of teaching is rendered intelligent and effective. A correct manner of teaching is gained by observing good models of teaching in the several classes, and by daily practice in teaching under helpful criticism. We find that a clear apprehension of the ends of teaching and a practical understanding of the principles in accord with which those ends must be secured, tend to make intelligent, effective and enthusiastic teachers.

The boarding-hall, under the efficient management of the present matron, furnishes a pleasant home for the students whose residence is in other towns than Westfield. The social life of the hall is very helpful, and the hours of recreation there

spent in diversions, arranged by the students and teachers, are restful and conducive to health of body and of mind. The reading-room and the library in the hall furnish opportunity for collateral reading upon the topics included in the normal course of study. The students are so much interested in these helps that they are devising means to increase this library. From year to year we are improving the interior of the building. Principal Greenough spent a portion of his summer vacation in supervising the work of replastering and refitting a considerable portion of the building, including a new provision room, and the repairing of the heating apparatus. The exterior wood-work of the hall, including the piazzas, needs repairing and painting. The fire-escapes on both sides of the building and the fence surrounding the grounds also need repairing and painting.

Besides those already mentioned, the following gentlemen have addressed the school: Mr. Henry T. Bailey, agent of Board of Education; Prof. T. H. Safford of Williams College; Rev. S. W. Dike; Prof. G. H. Palmer of Harvard University; Prof. J. B. DeMotte; Rev. F. D. Woods, and others.

The usual statistics are appended.

M. B. WHITNEY,  
A. P. STONE,

*Visitors.*

WESTFIELD, Dec. 15, 1892.

*Westfield Normal School Statistics for 1891-92.*

## I.

	WINTER TERM.			SUMMER TERM.			FOR THE YEAR.		
	Young Men.	Young Women.	Totals.	Young Men.	Young Women.	Totals.	Young Men.	Young Women.	Totals.
Number of pupils in school, . . .	7	119	126	7	115	122	7	140	147
Number of pupils in entering classes, . .	2	48	50	-	17	17	2	65	67
Number of graduates, . . .	-	10	10	2	21	23	2	31	33
Average age of enterers, . . .	Yrs. Mos. 22 3.0	Yrs. Mos. 18 10.6	Yrs. Mos. 19 0.3	Yrs. Mos. -	Yrs. Mos. 20 4.0	Yrs. Mos. 20 4.0	Yrs. Mos. 22 3.0	Yrs. Mos. 19 3.2	Yrs. Mos. 19 4.3
Average age of graduates, . . .	-	20 7.7	20 7.7	23 5.9	20 9.2	20 0.1	23 5.9	20 8.7	20 10.8
Number of enterers who had taught, . .	2	13	15	-	10	10	2	23	25
Number of pupils receiving State aid, . .	3	40	43	3	45	48	3	63	66

*Westfield Normal School Statistics for 1891-92 — Concluded.*

## II.

NUMBER OF STATES, ETC., REPRESENTED BY PUPILS.		Number of Pupils from each State represented.		Number of Pupils from each County of Massa- chusetts represented.		Occupations of Fathers of Enterers.		Number of Pupils from High Schools, Grammar Schools, etc.	
States, . . . . .	8	Connecticut, . . . . .	9	Barnstable, . . . . .	1	Contractors, . . . . .	3	Academies, . . . . .	6
Towns and cities, . . . . .	74	District of Co- lumbia, . . . . .	1	Berkshire, . . . . .	13	Factory officials, . . . . .	4	District schools, . . . . .	2
Counties in Massachusetts, . . . . .	7	Iowa, . . . . .	1	Franklin, . . . . .	14	Farmers, . . . . .	29	Grammar schools, . . . . .	6
Families, . . . . .	145	Massachusetts, . . . . .	126	Hampden, . . . . .	68	Merchants, . . . . .	1	High schools, . . . . .	47
		New Hampshire, . . . . .	2	Hampshire, . . . . .	19	Skilled laborers, . . . . .	12	Unclassified, . . . . .	6
		New York, . . . . .	1	Sufolk, . . . . .	2	Unskilled laborers, . . . . .	8		
		Vermont, . . . . .	6	Worcester, . . . . .	9	Unclassified, . . . . .	10		
		Virginia, . . . . .	1						



## STATE NORMAL SCHOOL, WORCESTER.

E. HARLOW RUSSELL, PRINCIPAL.

### INSTRUCTORS.

E. HARLOW RUSSELL, Principles of Education, Theory and Art of Teaching, Hygiene, Reading, Physical Exercises; HENRY W. BROWN, Psychology, English Grammar and Literature, German; CHARLES F. ADAMS, Arithmetic, Geometry, Geography, Geology, Physics, News; Miss REBECCA JONES, Elementary Methods, Sewing, Supervision of Apprentices; Miss ELLEN M. HASKELL, History, Civil Government, English, History of Education, Reading; Miss JULIET PORTER (Librarian), Physiology, Geography, Arithmetic, Algebra, Geometry; Miss HELEN F. MARSH, Music, Drawing; Miss ARABELLA H. TUCKER, Botany, English Grammar, Penmanship, Gymnastics; Mrs. MARION J. SUMNER, Choral Singing; Miss E. LOUISE RICHARDS, Kindergartner; Miss OLIVE RUSSELL, Assistant Kindergartner.

### INTRODUCTORY.

The visitors of this school may sum up the results of their inspection during the past year by saying that they have found sound and efficient instruction in all departments, skilful training in the practice of teaching, wise management and discipline, unity of aim and methods, — these on the part of the instructors; while on the part of students there has been manifest a remarkable degree of that diligence, zeal and enthusiasm that go to make up what may be properly termed the professional spirit of the teacher. The visitors have noticed that the daily routine in this school is so managed as to be largely free from dull and irksome monotony. The exercises exhibit a variety, freshness and scope that at once attract the attention of even a casual visitor, and constantly suggest to the pupils how a school in its every-day work may be so infused with life and interest as to make its yoke easy and its burdens light. This happy result is no doubt due to several causes, among which may be mentioned the high personal character of the teaching staff and the unusual harmony and mutual respect in which

they work together, the freedom and self-government that have always prevailed and been encouraged among the students, and a certain frankness and naturalness in the whole intercourse of the school which does away with the need of cumbersome rules and formalities. This spirit is naturally imbibed in some measure by the graduates, many of whom, as might be expected, carry it into their own teaching with gratifying results.

The visitors note another excellent feature, very suitable, it would seem, to the aim of a normal school, namely, the practice of making investigations. Of course we do not mean by this that students here are encouraged to attempt researches beyond their years or capacities ; it is simply the disposition to push inquiries upon ordinary subjects somewhat beyond the usual limits of the text-book and class-room, to follow the various streams of knowledge back towards their sources. This is well exemplified in the domain of child-study, where this school has gained a national reputation ; but it is also more or less seen in other directions, as in botany, drawing, history, composition, etc., and its influence for good is felt in nearly all the work of the school, and is plainly shown in the character of the graduates' theses, which have attracted attention for their originality and genuineness. The whole thing is merely an expansion of the objective method of teaching and learning, whereby the student, whether young or mature, gets his facts as much as possible at first hand by original observation and experiment, and as such it deserves our recognition and praise.

#### THE ENTERING CLASSES.

The pupils admitted during the year have shown marked superiority in point of preparation for normal school work. Of the class that entered in September, seventy-four per cent. were graduates of high schools, which is the largest proportion ever shown here in an entering class. We find, however, among our candidates noticeable deficiency in English, both the language and the literature, which is perhaps shown most conspicuously in their inability and even indisposition to make much use of a dictionary, and in a feeble and imperfect sense of the substance and form of what they hear or read. Probably the defect, which indeed extends much further than to English topics, is not due to any single cause ; it appears to be, in part



at least, what might be termed chronic fatigue of mind, as if it were the result of a long-continued strain at attention and memory exercised from earliest years upon too great a multitude of details and spread over too wide a field of attempted acquisitions. There is reason to fear that the usual normal school course, burdened as it is with the task of making up previous deficiencies as well as doing its own proper work, is but a poor remedy for the trouble complained of; but there is encouragement in the fact that the need of special preparation is more generally recognized than formerly and is more adequately met.

#### STODDARD TERRACE AND THE PRINCIPAL'S HOUSE.

The completion and occupancy of the dormitory and principal's house give great satisfaction to the visitors, as marking a step forward in the history of this school. The handsome double structure, though not showy, is a great ornament to the grounds, while the much-needed accommodations it affords not only serve the convenience of the public, but give to the institution an air of permanence and domestic comfort that has been noticeably wanting hitherto. The new building proves highly satisfactory in all its interior appointments, and fully meets the needs and expectations of all concerned.

#### CHILDREN'S CLASS.

A novel and interesting feature of the present year is the establishment within the school building of a children's class or kindergarten. The class numbers twenty-six children between three and five years old, including both sexes in about equal numbers, and is in immediate charge of Miss E. Louise Richards, an accomplished and experienced kindergartner, assisted by Miss Olive Russell, a graduate (1889) of the normal school. A beautiful and sunny suite of rooms in the south-west corner of the ground floor has been properly fitted up for its exclusive accommodation, and the class is already the object of great attraction and interest on the part of students and teachers. It is made serviceable to our pupils for purposes of daily observation and study, but not for practice, and we do not as yet undertake to make the training of kindergartners a part of our

regular course. The class at present affords excellent opportunities for certain lines of child-study, and for experimentation in elementary teaching and the care and management of young children.

### THE GRADUATES.

As usual, the graduates of the present year have found schools, and, as usual, the demand for graduates has considerably exceeded our supply. Their success as teachers is such, even at the start, as to justify and commend their training, and the stamp of popular approval is unmistakably set upon their qualifications.

Special mention should be made of the Graduates' Association, an organization formed at first for social reunions, but which has grown to large proportions, and has correspondingly enlarged its aims to include, among other things, liberal contributions of money for the carrying on of original investigations in child-psychology in the interest of the science of education.

During the past summer the association has employed an expert psychologist, Mr. Thaddeus L. Bolton, Fellow of Clark University, at a cost of nearly four hundred dollars, to make a beginning in the working up, in a thoroughly scientific manner, of the rich mass of material now in the possession of the school, and has pledged nearly a thousand dollars more in furtherance of the same object. This material consists of upwards of seventeen thousand records of miscellaneous observations made upon individual children during the past eight years by our students, as part of their regular study of psychology by the objective method. The vast store of facts thus gathered is believed to possess permanent value for the educational work of the future, on account of the direct and obvious bearing of such facts upon the science and art of primary teaching. A few important generalizations have already been drawn from these records, and incorporated with the instruction in psychology given in this school; but the material is undoubtedly capable of yielding far greater results. We are convinced that it is a vein that ought to be worked. The present staff of instructors, however, are too fully occupied with their regular school duties to undertake so great an amount of additional labor, nor does it seem right or becoming to permit graduates to tax their small

incomes for an object that falls so legitimately within the scope of proper provision for the best instruction of the school. The visitors, therefore, recommend the employment of an assistant in psychology, whose work may help to make available to the school, and finally of course to the other normal schools and the public, the results of these observations.

#### REPAIRS.

The main building has been occupied continuously for more than eighteen years, and, with the exception of a new plumbing service, has undergone no considerable repairs. The need of replastering, repainting, and some rearrangement of rooms and stairways, together with a wholly new ventilating apparatus, is now felt, and must, before long, be met by an adequate appropriation. While the building is not yet shabby, it is in a condition of disrepair, and by no means compares favorably with most of the other schools of the State.

#### ACKNOWLEDGMENTS.

Rev. Charles M. Lamson, D.D., of St. Johnsbury, Vt., deserves our grateful acknowledgments for his most acceptable anniversary address upon the theme, "Put Yourself in His Place." Several other interesting addresses, as well as many acceptable gifts and favors, are enumerated in detail in our annual catalogue and register.

#### STATISTICS.

The usual statistical information for the year 1891-92 is hereto appended:—

1. Numbers: first (fall) term, 150; second (spring) term, 150; whole number for the year, 181.

2. Numbers in entering classes: in September, 1891, 37; in February, 1892, 23; total, 60.

3. Average age of pupils admitted: in September, 1891, 19 years 6 months; in February, 1892, 18 years  $4\frac{1}{2}$  months.

4. Residences of pupils admitted: Worcester County, 55; Middlesex County, 1; Kansas, 1; Kentucky, 1; New Hampshire, 1; Vermont, 1; total, 60.

5. Occupations of pupils' parents: agents, 2; farmers, 9; inspectors, 2; laborers, 5; mechanics, 26; merchants, 6; policemen, 3; unclassified, 7; total, 60.

6. Numbers in graduating classes: in January, 1892, 17; in June, 1892, 19; total, 36.

7. Average age of graduates: in January, 1892, 22 years; in June, 1892, 21 years 9 months.

8. Library: reference-books reported last year, 2,901; volumes added this year, 259; total, 3,160; text-books reported last year, 4,734; volumes added this year, 110; total, 4,844. Whole number of volumes in the library, 8,004.

E. B. STODDARD,

A. P. STONE,

*Visitors.*

WORCESTER, Dec. 31, 1892.

## STATE NORMAL ART SCHOOL.

GEORGE H. BARTLETT, PRINCIPAL.

## INSTRUCTORS.

Mr. GEORGE H. BARTLETT, Freehand Drawing, Historic Ornament, Design and Modelling the Figure; Mr. E. W. HAMILTON, Painting in Water-Color, and Historic Schools of Painting; Mr. ALBERT H. MUNSELL, Anatomy, Drawing and Painting from the Antique Figure, and Life Model; Miss M. A. BAILEY, Design and Painting in Oil; Mr. A. K. CROSS, Freehand and Instrumental Drawing; Miss M. LOUISE FIELD, Public School Class, Psychology, Principles and Methods of Teaching, History of Education, Drawing in the Public Schools; Miss W. N. DRANGER, Assistant in the Public School Class; Miss DERISTHE L. HOYT, Lecturer on Art; Mr. GEORGE JEPSON, Mechanical Drawing; Mr. HENRY D. KENDALL, Building Construction, Architectural Design; Miss ANNIE E. BLAKE, Modelling in Clay and Casting; Mr. JOHN L. FRISBEE, Ship Draughting.

It will be remembered that a year ago Miss Deristhe L. Hoyt, after eighteen years of almost uninterrupted service, — having been connected with the school from the beginning, — was granted leave of absence for the full year, with the hope that she would find herself both able and willing to resume her work; but this hope has not been realized. We have, however, secured her services for a course of lectures on art, which will preserve her name and valuable influence to the school, it may be, for years to come. Mr. E. W. Hamilton, a valuable acquisition to the school, who discharged with great acceptance the duties of Miss Hoyt's department the last school year, will be continued in the same through the current year.

The remaining work of the school continues substantially in the same hands as heretofore. Though this work is in the lines of industrial art, it comes every year into closer and still closer touch with fine art. Its excellencies are becoming more and more emphatically recognized. Some things which in the early history of the school were the occasion of some prejudice have wholly disappeared, and artists of undoubted



attainments bestow upon its work the meed of very high praise. The State has occasion to be much gratified with the annual progress the school is making. It is possible that ere long there may be found good reasons for still further enlarging its scope and influence. In this connection we would call especial attention to a paper by one of the teachers of the school, Mr. Albert H. Munsell, published in this volume, and entitled "Interest of the State in the advancement of art," as well worthy the attention of our educational authorities, and involving considerations that our business men cannot afford to overlook. It is understood that the positions of this paper have the support of the principal, Mr. George H. Bartlett, and of Mr. E. W. Hamilton, both of whom, as well Mr. Munsell himself, are familiar with kindred institutions abroad.

The original design of the school building, erected in 1886-87, contemplated, at some future time, should the State desire it, a certain amount of enrichment befitting the character of the school. Very little was done at the time, and that chiefly at the two entrances on Newbury and Exeter streets. The stone work in general was left in such form that the contemplated carving could be readily done at any time. A year ago, therefore, the architects, Messrs. Hartwell & Richardson, were requested to mature their original designs, and ascertain the cost of their execution. It was found that the work could be accomplished for \$5,343.62. The Legislature generously appropriated that sum, and a contract was made with Messrs. John Evans & Co. to execute the work. The contract is now very near completion. It may be very briefly described as follows: The completion of the carving around the main entrances on Newbury and Exeter streets; the carving of the string courses and such other members as had been originally intended for this enrichment; and the modelling and completion in stone of the sculptured panels of the two gables crowning the wall of the Newbury Street front.

The treatment given these architectural features which mark the entrances, stories and different divisions of the building, as indicated upon the exterior, are in keeping with the style in which the building was designed. Interest centres in the panels which occupy the gables. The designs filling these panels, which are about fourteen and one-half feet across by

nearly seven and one-half in height, were roughly studied in pencil and charcoal, next modelled and cast at a small scale, then modelled and cast full size; this last being carefully copied in the stone. The panel nearest Exeter Street represents the genius of art instructing the pupils. In the extreme right corner is a pupil taking a measurement of the Sphinx, indicating a beginner in art. The other pupils are engaged in studying drawing, painting and sculpture. The other panel represents the genius of art awarding the prizes to successful pupils. Every branch of art is represented, — architecture, sculpture and painting. In the left corner is a cupid sitting on a lion blowing the trumpet of fame; this indicates the victory of art over brute force.

The demand for teachers and especially for supervisors of drawing in the larger towns and cities of our Commonwealth and of the country is steadily growing. Pupils of the schools, and particularly graduates of the public school class, are rendering very acceptable service in these positions. Since October, 1891, the following pupils, so far as reported, have received appointments in the places named: —

Wilhelmina N. Dranger, Chelsea.  
Elizabeth Rust, Huntington, Pa.  
Jessie H. Prince, Lexington and Milton.  
Blanche I. George, Dedham.  
Ludwick Frank, Providence, R. I.  
Mary A. Pearson, Cohasset.  
Ethel S. Chute, Shirley.  
Amy R. Whittier, Bangor, Me.  
Elizabeth J. Hilles, Quincy.  
Martha M. Dix, Normal Art School.  
Alice F. Davenport, Normal Art School.  
Joseph A. Frizzell, Normal Art School.

Josephine Rintz, Minneapolis, Minn.  
Catharine Robinson, Vermont.  
Bernard V. Carpenter, Buffalo, N.Y.  
Walter L. Sargent, Weston.  
Paul F. Pond, Hampden, Va.  
Kate B. Wentworth.  
Laura B. McLean, Canton.  
Mary A. Hammond, Boston.  
Charles W. Thurston, Boston.  
Elmira G. Smith, Newton.  
Evelyn F. Cross, Winchester.  
Grace Elliot, Augusta and Hallowell, Me.  
Grace E. Southworth, Stoughton.

Number of students for the school year, 1891-92, 215; males, 37; females, 178.

Average age, 22 years.

Certificates June, 1892: Class A, 25; Class B, 8; Class C, 6; Class D, 17; total, 56.

Diplomas A, B, D, 11; Diplomas A, C, 6; Diplomas public school class, 7; total, 24. Grand total, 80.

Residences of pupils: Suffolk County, 79; Middlesex County, 68; Essex County, 9; Bristol County, 7; Norfolk County, 21; Hampshire County, 1; Plymouth County, 8; Worcester County, 17; Berkshire County, 3; Skowhegan, Me., 1; Topeka, Kan., 1; total, 215.

Parents' occupations, 1891-92: mechanics, 34; merchants and traders, 34; retired, 10; deceased, 37; professions, 18; artists and artisans, 15; manufacturers, 22; other callings, 45; total, 215.

A. A. MINER,  
KATE GANNETT WELLS,

*Visitors.*

Boston, Dec. 31, 1892.



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FIFTY-SIXTH ANNUAL REPORT

OF THE

SECRETARY OF THE BOARD.

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## SECRETARY'S REPORT.

*To the Board of Education.*

I respectfully present herewith the fifty-sixth annual report of the secretary.

### SUMMARY OF STATISTICS FOR 1891-92, THE YEAR ENDING MAY 1, 1892.

Number of cities and towns, 352; cities, 28; towns, 324.	
All have made the annual returns required by law.	
Number of public schools, . . . . .	7,336
Increase for the year, . . . . .	97
Number of persons in the State between the ages of five and fifteen years, May 1, 1891, . . . . .	382,956
Increase for the year, . . . . .	6,465
Number of pupils of all ages in the public schools during the year ending May 1, 1892, . . . . .	383,217
Increase for the year, . . . . .	6,231
Average membership of pupils in all the public schools during the year ending May 1, 1892,* . . . . .	313,214
Increase for the year, . . . . .	5,261
Average attendance in all the public schools during the year, .	283,648
Increase for the year, . . . . .	5,046
Per cent. of attendance, based upon the average membership, .	90
Number of children under five years of age attending the public schools, . . . . .	2,912
Decrease for the year, . . . . .	217
Number of persons over fifteen years of age attending the public schools, . . . . .	35,090
Increase for the year, . . . . .	1,186
Number of persons employed as teachers in the public schools during the year: men, 992; women, 9,973; total, . . .	10,965
Number of teachers required by the public schools, . . .	9,486
Number of teachers who have attended normal schools, . . .	4,059
Increase for the year, . . . . .	323

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\* By a change in the financial year, the returns from Boston cover a period of nine months, ending with Jan. 31, 1892.

Number of teachers who have graduated from normal schools,	3,267
Increase for the year, . . . . .	197
Average wages of male teachers per month in public schools,	\$134 22
Increase for the year, . . . . .	\$16 15
Average wages of female teachers per month in public schools,	\$46 52
Decrease, . . . . .	\$1 65
Aggregate of months all the public schools have been kept during the school year, . . . . .	67,091-4
Average number of months the public schools have been kept,	8-11
Increase for the year, . . . . .	2 days.
Number of high schools, . . . . .	245
Increase for the year, . . . . .	1
Number of teachers in high schools, . . . . .	904
Number of pupils in high schools, . . . . .	27,482
Amount of salaries paid to principals of high schools, . . .	\$317,746 57
Evening schools: number, 255; kept in 55 cities and towns.	
Number of teachers, 1,048; whole number of pupils, 29,221;	
men, 22,340; women, 6,881; average attendance, 15,287;	
expense, . . . . .	\$131,557 63
Amount raised by taxation and expended for support of public schools, including only wages and board of teachers, fuel for the schools and care of fires and school-rooms, . . .	\$5,578,950 29
Decrease for the year, . . . . .	\$128,561 08
Expense of supervision of the public schools, . . . . .	\$249,699 96
Salaries of superintendents included in the above, . . . .	\$153,208 48
Expense of preparing and printing school reports, . . . .	\$12,165 59
Expense of sundries, books, stationery, maps, charts, etc, .	\$532,530 73
Expense of transportation of pupils, . . . . .	\$38,726 07
Amount expended in 1891-92 for new school-houses, . . .	\$1,916,064 99
Amount expended for alterations and permanent improvements in school-houses, . . . . .	\$252,371 38
Amount expended for ordinary repairs, . . . . .	\$478,429 25
Amount of voluntary contributions to public schools, . . .	\$4,995 54
Amount of local school funds, the income of which can be appropriated to schools and academies, . . . . .	\$2,555,488 46
Income of local funds appropriated to schools and academies, .	\$114,500 42
Income of funds appropriated for public schools at the option of the town, as surplus revenue, tax on dogs, etc., . . .	\$187,779 81
Income of State school fund paid to cities and towns in aid of public schools for the school year 1891-92, . . . . .	\$63,842 94
Of this amount there was appropriated for apparatus and books of reference, . . . . .	\$2,219 18
Aggregate returned as expended upon public schools alone, exclusive of repairing and erecting school-houses, . . .	\$6,668,690 93
Of the above to each child in the State between five and fifteen years of age, . . . . .	\$17 41
Including in the aggregate above the expenses of repairing and erecting school-houses, the sum is . . . . .	\$.9,315,556 55

To each child in the State between five and fifteen years of age, . . . . .	\$24 32
Percentage of valuation of 1891 appropriated for public schools, including only wages and board of teachers, fuel for the schools and care of fires and school-rooms, . . .	.002 $\frac{48}{100}$
Percentage of valuation of 1891 appropriated for public schools, including all the items above, . . . . .	.004 $\frac{14}{100}$
Number of academies, . . . . .	94
Whole number of students for the year in academies, . . .	17,250
Amount of tuition paid, . . . . .	\$504,357 58
Number of private schools, . . . . .	399
Whole number of pupils attending for the year, . . . . .	43,355
Estimated amount of tuition, . . . . .	\$680,445 79

### ANALYSIS OF STATISTICAL RETURNS FOR 1891-92. — SCHOOL ATTENDANCE.

#### *Enumeration of Children between Five and Fifteen Years of Age.*

A necessary step for improving the school attendance, and keeping it up, consists in making an accurate enumeration of the children within certain ages. This enumeration is required by law to be made annually in the month of May. The ages specified are from five to fifteen. Compliance with this law is quite uniform. Under the law of 1855 the enumeration was made by the assessors. Though, for some reason, the law was amended in 1874 so as to require the school committee to cause the enumeration to be made, still in most towns it is made by the assessors in connection with their own specific duties. It would doubtless be more exact if it were entrusted to a person whose sole business for the time being is to make the enumeration. The fact that the enumeration emphasizes the ages between five and fifteen, that the ratios of school attendance and of school appropriations are estimated upon these ages as a basis, gives the impression that these years limit the legal school age; but there is no limit to school age except that which may be fixed by the school committees.

*Number of School Children in the State.*

*I. Table showing the Number of Children between Five and Fifteen Years of Age in the State, also the Annual Increase for Ten Successive Years, from May 1, 1882, to May 1, 1891.*

	Number of Children.	Increase.		Number of Children.	Increase.
1882, . .	329,459	8,082	1887, . .	359,504	6,452
1883, . .	336,195	6,736	1888, . .	367,785	8,281
1884, . .	343,810	7,615	1889, . .	370,116	2,331
1885, . .	348,903	5,093	1890, . .	376,491	6,375
1886, . .	353,052	4,149	1891, . .	382,956	6,465
Average increase, . . . . .					6,158

The whole number of children in the State between five and fifteen years of age, May 1, 1891, was 382,956; in 1882, ten years previous, it was 329,459, which shows an increase during this period of 16.23 per cent. The increase in our whole population for the same period exceeds 25 per cent. The difference of 9 per cent. in these two items it is necessary to take into account in comparing the school attendance with the increase in population. The average increase of children of the above ages in the State for ten years, previous to May 1, 1891, was 6,158; the increase from 1890 to 1891 was 6,465, which exceeds the average for ten years by 307.

*Number of Children attending the Public Schools.*

*II. Table showing the Number of Children of all Ages in the Public Schools, with the Annual Increase and Decrease from May 1, 1883, to May 1, 1892.*

	Pupils of All Ages in Public Schools.	Increase and Decrease.		Pupils of All Ages in Public Schools.	Increase and Decrease.
1883, .	335,872	Increase, 5,451	1888, .	358,000	Increase, 4,639
1884, .	342,012	Increase, 6,140	1889, .	363,166	Increase, 5,166
1885, .	339,714	Decrease, 2,298	1890, .	371,492	Increase, 8,325
1886, .	349,617	Increase, 9,903	1891, .	376,986	Increase, 5,494
1887, .	353,361	Increase, 3,744	1892, .	383,217	Increase, 6,231
Average increase, . . . . .					5,079

The whole number of children of all ages attending the public schools during the year ending May 1, 1892, was 383,217; in 1883 it was 335,872, which shows an increase during this period of 14.09 per cent. This is less by 2 per cent. than the increase for ten years in the number of children in the State; but this difference is more than offset by the increase in the number of children attending parochial schools, which cannot be less than 4 per cent. of the whole number attending all schools. The number attending parochial schools is an important item to consider in calculating the ratio of school attendance at the present time, as compared with an earlier date.

The average increase of attendance of children of all ages for ten years previous to May, 1892, was 5,079; the increase from 1891 to 1892 was 6,231, which exceeds by 1,152 the average increase for ten years. This increase, compared with the increase in the number of children between five and fifteen years of age reported above, shows that the increase in the school attendance, including attendance upon private schools, for the year is greater than the increase in the school population.

There is this year, as usual, a greater number of children belonging to the schools than is given in the enumerators' lists. Were there no other explanation, this would be sufficiently accounted for by the fact that some children enter before they are five and that numbers attend after reaching the age of fifteen; and by the further fact that the enumeration is made at the beginning of the school year, while the report of attendance is made at its close.

The ages between which the law makes attendance compulsory are eight and fourteen,— eight and fifteen where gratuitous instruction is provided in any form of industrial education. Much greater care should be exercised by the enumerators in recording the children between these ages. There is an approach to accuracy in the enumeration of children between five and fifteen which apparently is not attempted concerning those of the compulsory age. It is very desirable to have tables showing the number of children of the compulsory age attending schools, but the returns for this period are too incomplete to warrant inferences which might be drawn from them were they put in tabular form.



*III. Table showing the Attendance upon the Public Schools of Children whose Ages are between Five and Fifteen Years, also of those under Five and over Fifteen, with their Annual Increase and Decrease from May 1, 1883, to May 1, 1892.*

	Pupils in School between Five and Fifteen Years of Age.	Increase and Decrease.	Pupils under Five Years.	Increase and Decrease.	Pupils over Fifteen Years.	Increase and Decrease.
1883, .	310,462	Increase, 4,885	1,616	Decrease, 30	23,794	Increase, 596
1884, .	315,727	Increase, 5,265	1,517	Decrease, 99	24,768	Increase, 974
1885, .	312,751	Decrease, 2,976	1,465	Decrease, 52	25,498	Increase, 730
1886, .	320,212	Increase, 7,461	1,433	Decrease, 32	27,972	Increase, 2,474
1887, .	323,018	Increase, 2,806	1,375	Decrease, 58	28,968	Increase, 996
1888, .	327,279	Increase, 4,261	1,178	Decrease, 197	29,543	Increase, 575
1889, .	331,228	Increase, 3,949	1,130	Decrease, 48	30,758	Increase, 1,215
1890, .	336,100	Increase, 4,872	2,578	Increase, 1,448	32,814	Increase, 2,056
1891, .	339,953	Increase, 3,853	3,129	Increase, 551	33,904	Increase, 1,090
1892, .	345,215	Increase, 5,262	2,912	Decrease, 217	35,090	Increase, 1,186
Average increase, 4,272			Average increase, 1,189			

The above table shows an increase of attendance upon the public schools of children between five and fifteen years of age during the last year, greater than the average increase for the past ten years, by 990. It shows an increase of attendance for the last year of those over fifteen corresponding almost exactly with the average for ten years. The decrease of 217 in the number attending under five years of age may be occasioned by the returns of the Boston statistics, which cover but three-fourths of a year. It is well known that an increasing number of children under five years of age are yearly attending public kindergartens. The increase is probably greater in Boston than in all the other towns which have incorporated kindergartens into their school system. Up to the time they began to be introduced into the school system there was a gradual decline in the attendance of young children in the schools; since then, till the present year, there has been an advance.

The ratio of attendance of children between five and fifteen years of age to the children in the State between these ages is 90 per cent. Taking into account the numbers in attendance upon private schools of different kinds, knowing as we do that fully 10 per cent. of the whole school population attend parochial schools, it is safe to conclude that 94 or 95 per cent. of the children from five to fifteen years of age attend schools of some kind during a portion of the year.

The school attendance of children between eight and fourteen years of age, for at least twenty weeks of the year, will be found to coincide very nearly with the number of such children in the State. The exact verification of this statement is not possible, for the reason already given in another connection.

From reliable reports, and from the observations of the agents of the Board, it appears that in every part of the State there are a few children not regular attendants, and some that are regular non-attendants, who greatly need the restraining and elevating influences of the schools, and who, for want of these influences, are a constant menace to the good order of society and often to the schools themselves.

It is on account of this class of children that I recommend

#### AN AMENDMENT TO OUR LAWS FOR COMPULSORY ATTENDANCE.

So far as evident and persistent cases of truancy are concerned, our truant and compulsory laws are easily applied, and where there are efficient officers they are enforced; but there is much laxity in their enforcement in cases of irregularity of attendance, and especially where non-attendance is sanctioned by parents. The local truant officer, from evident causes, is deterred from applying the law which requires the parent to cause his child to attend school for a certain number of weeks during the year. In a few instances fines have been imposed for a violation of this law, and as a result a few children have been kept in school, but the law demands a somewhat more heroic application. It seems, too, to need interpretation or simplification in some of its details. It also needs a special officer to aid in its enforcement.

To assist the local truant officers where needed, and to secure a more independent enforcement of the truant and compulsory laws, I recommend the appointment of an additional

agent of the State Board of Education, who shall be assigned to the duty of visiting the towns, the schools, the homes and places of employment, for the purpose of securing the regular attendance upon school of all children required to attend; such agent to have all the powers at present conferred upon local truant officers, and to report to the Board of Education.

#### PUNCTUALITY, OR REGULARITY OF ATTENDANCE.

Thus far the statistics of attendance have reference to the proportion of children who attend school. Those which follow relate to the constancy of attendance of those who are members :—

*IV. Table showing the Average Membership and Yearly Increase of Membership of the Public Schools; also the Average Attendance, the Yearly Increase and the Ratio of Attendance for Ten Years from May 1, 1883, to May 1, 1892, inclusive.*

	Average Membership.	Increase of Average Membership.	Average Attendance.	Increase of Average Attendance.	Ratio of Attendance to Membership.
1883, . .	270,531	5,089	242,043	Increase, 6,304	.89469+
1884, . .	277,241	6,710	248,178	Increase, 6,125	.89510+
1885, . .	282,154	4,913	253,955	Increase, 5,787	.90005+
1886, . .	288,640	6,486	260,088	Increase, 6,133	.90108+
1887, . .	291,539	2,899	262,159	Increase, 2,071	.89922+
1888, . .	293,941	2,402	264,723	Increase, 2,564	.90057+
1889, . .	299,537	5,596	270,851	Increase, 6,128	.90423+
1890, . .	303,524	3,987	273,910	Increase, 3,059	.9024+
1891, . .	307,953	4,429	278,602	Increase, 4,692	.9045+
1892, . .	313,214	5,261	283,648	Increase, 5,046	.9056+
		Av., 4,777		Av. Increase for 10 yrs., 4,790.	

The average membership of the public schools for the last year was 313,214; this is an increase of 5,261 over that for the previous year; the average increase for ten years, from 1883 to 1892 inclusive, is 4,777. The average attendance for

the last year is 283,648; this is an increase of 5,046 over that for the previous year; the increase for ten years averages 4,790. The increase in the average attendance is slightly less than the increase in the average membership for the past year. The increase in both average membership and average attendance for the year is considerably greater than the averages of these items for the past ten years, and the ratio of average attendance to the average membership exceeds that of any previous year since the report of the average membership was required in the returns of school committees. It reaches 90.56 per cent. the present year. This result is gratifying, as showing a gain in the important habit of punctuality. The gain has been steady for the past eleven years, with two slight exceptions. In 1882 the ratio was 88.81 per cent. There are two or three evident causes for this higher ratio of attendance in recent years. The mass of population yearly becomes more concentrated; many towns have consolidated their schools and have provided conveyance for children residing at a distance from them; and the increase in attendance is much improved by the superintendents recently introduced into the rural towns.

*V. Table showing by Counties the Number of Towns whose School Attendance, based on the Average Membership, exceeds Ninety Per Cent. for the Year 1891-92.*

COUNTIES.	Number of Towns in County.	Number of Towns in County Attendance over 90 Per Cent.	COUNTIES.	Number of Towns in County.	Number of Towns in County Attendance over 90 Per Cent.
Barnstable, .	15	9	Hampshire, .	23	9
Berkshire, . .	32	8	Middlesex, .	54	42
Bristol, . .	20	6	Nantucket, .	1	0
Dukes, . .	7	0	Norfolk, . .	27	20
Essex, . .	35	18	Plymouth, .	27	10
Franklin, . .	26	16	Suffolk, . .	4	2
Hampden, . .	22	11	Worcester, .	59	43
Totals, . . . . .				352	194

From the above table it appears that the number of towns whose average attendance is above 90 per cent. is 194, which is a falling off of 18 from the number of the previous year. And yet with this decline in the number of towns, there is shown by Table IV. to be an increase in the average attendance in the State of .11 of 1 per cent. The falling off is in the sparsely populated towns; the increase is in those of large school populations. It is not possible to keep the ratio of attendance in the former up to that reached with comparative ease in the latter class of towns.

Four towns report 97 per cent., two 96 per cent., and five 95 per cent. This gives eleven above 95 per cent., against eighteen the previous year. It is only under the most favorable circumstances and with strenuous efforts that such per cents. can be reached by the schools of a town as a whole. As important as is the practice of regular attendance to the individual and to the school, it often costs more to attain these high per cents. than the attainment is worth.

When, however, the average attendance for the whole town is much below 90 per cent. under ordinary conditions, there is implied indifference or culpable neglect; yet by the last returns 157 towns are below it, most of them, however, but slightly. Those which fall below eighty are as follows:—

*VI. Table giving the Names of the Towns whose Average Attendance for the Year 1891-92 fell below Eighty Per Cent. of the Membership.*

TOWNS.	Per Cent. of Attendance.	TOWNS.	Per Cent. of Attendance.
Sheffield, . . . .	79	Tyringham, . . . .	75
Hancock, . . . .	78	Windsor, . . . .	75
Mount Washington, . .	78	Russell, . . . .	74
Raynham, . . . .	77	Freetown, . . . .	73
Mattapoissett, . . . .	76	Gay Head, . . . .	69
Plympton, . . . .	75		



Included in the above list are three towns that were in the corresponding list last year. The number of towns was eleven then, it is eleven now; eight having exchanged places with the eight that have gone higher.

*VII. Table showing the Number of Towns in the Several Counties, the Ratio of whose School Attendance falls below Ninety.*

COUNTIES.	Number of Towns in County.	Number of Towns below 90 per cent.	Ratio to whole Number of Towns in County.	COUNTIES.	Number of Towns in County.	Number of Towns below 90 per cent.	Ratio to whole Number of Towns in County.
Barnstable, .	15	6	.40	Hampshire, .	23	14	.61
Berkshire, .	32	24	.75	Middlesex, .	54	12	.22
Bristol, . .	20	13	.65	Nantucket, .	1	1	1.00
Dukes, . .	6*	6	1.00	Norfolk, .	27	7	.26
Essex, . .	35	18	.51	Plymouth, .	27	17	.63
Franklin, .	26	10	.38	Suffolk, .	4	2	.50
Hampden, .	22	11	.50	Worcester, .	59	16	.27
Totals, . . . . .					351	157	—

\* Seven since 1892.

*VIII. Table showing the Counties arranged according to the Percentages of their Number of Towns having less than Ninety Per Cent. of Attendance.*

COUNTIES.	Per Cent.	COUNTIES.	Per Cent.
Middlesex, . . . .	22	Essex, . . . .	51
Norfolk, . . . .	26	Hampshire, . . . .	61
Worcester, . . . .	27	Plymouth, . . . .	63
Franklin, . . . .	38	Bristol, . . . .	65
Barnstable, . . . .	40	Berkshire, . . . .	75
Hampden, . . . .	50	Dukes, . . . .	100
Suffolk, . . . .	50	Nantucket, . . . .	100

High per cents. of attendance are more valued for what they imply than for what they actually show. As an end they should be lightly esteemed. Regular attendance is a necessary means to the formation of good habits of study ; it implies interest in the school work, and a healthy school spirit.

To be useful for purposes of comparison the per cents. must have a common basis, and be faithfully conformed to that basis.

Until a uniform length of time is adopted for dropping from the roll absentees, the same per cents. of attendance represent different values. It is to secure to them equal values that a new rule regarding this length of time is proposed in the school register. Under "Directions for Teachers," in the register, Rule 3 now reads as follows : —

3. Every pupil shall be considered a member of the school from the time of his first entrance to the day he is dropped from the roll, which shall be at the end of ten successive half-days or five whole days of absence, or whenever it is known that he has withdrawn from the school with no intention of returning for the term.

It may be said as an objection to this rule that, if presumably after absence for a longer or shorter period of time a pupil will return to the school, he should continue to be counted as a member. But how long shall such membership be presumed? Shall it be for the entire school course, for one year, for one term, for one month or for a shorter time? All fix a limit somewhere ; hitherto the direction in the register has fixed it at one term, with the provision that the membership should terminate when it is known that the pupil has left school with no intention of returning for the term. Boston fixes the limit at one month. Cambridge and several other large cities fix it at ten successive half-days or five whole days of absence, — all with the provision above mentioned. The length of time is entirely arbitrary, and the only valid objection which lies against the above rule is the shortness of the time, five days, and this is a matter of judgment. Since it is desirable to secure uniformity, and since the five days' rule is already extensively observed and will be readily acceded to, and since the fixing of a time is an arbitrary matter, its universal adoption is recommended for the limit of membership and the basis of school attendance.



## TARDINESS AND DISMISSION.

A considerable amount of school time is lost by tardiness and dismission. That some account may be made of this, and that it may be reduced to the minimum, Rule 7 has been introduced in the register under “Directions for Teachers;” it is as follows:—

7. The total of the time in school days of each pupil’s absence by reason of tardiness and dismissal during school sessions should be found and recorded in the register in the column provided therefor. A daily record of such absence should be made in a book kept by the teacher for this purpose.

Additional columns have been provided for entering in the register the lost time thus occasioned. It would be right and just to include this in the amount of the pupils’ absence, but we do not recommend this at present. We would, however, recommend that committees and superintendents state the amount in their reports. Such public notice would tend to restrict tardiness and dismission in a large number of schools.

## TEACHERS AND TEACHERS' WAGES.

IX. Table showing the Number of Teachers employed, Male and Female, and Total, for Ten Years; Their Wages per Month, with the increase and decrease of the Same; also the Number of Teachers who have attended Normal Schools, and the Number of Normal Graduates employed.

	TEACHERS.			WAGES PER MONTH.				NORMAL TEACHERS.			
	Male.	Female.	Total.	Male.	Increase and Decrease.	Female.	Increase and Decrease.				
1883,	1,038	8,197	9,235	\$103 33	Increase, \$0 43	\$41 90	Increase, \$7 58	2,581	Increase, 165	2,155	Increase, 166
1884,	1,058	8,340	9,398	108 02	Increase, 4 69	44 18	Increase, 2 28	2,744	Increase, 163	2,240	Increase, 85
1885,	1,061	8,460	9,521	120 72	Increase, 12 70	43 85	Decrease, 33	2,866	Increase, 122	2,392	Increase, 152
1886,	1,060	8,610	9,670	111 23	Decrease, 9 49	43 97	Increase, 12	3,003	Increase, 137	2,420	Increase, 28
1887,	1,033	8,696	9,729	116 85	Increase, 5 62	44 93	Increase, 96	3,134	Increase, 131	2,533	Increase, 113
1888,	1,010	8,887	9,897	119 34	Increase, 2 49	44 88	Decrease, 05	3,246	Increase, 112	2,677	Increase, 144
1889,	901	9,222	10,123	108 88	Decrease, 10 46	45 93	Increase, 1 05	3,373	Increase, 127	2,689	Increase, 12
1890,	1,017	9,307	10,324	126 58	Increase, 17 70	44 79	Decrease, 1 14	3,504	Increase, 161	2,819	Increase, 130
1891,	1,016	9,630	10,646	118 07	Decrease, 8 51	48 17	Increase, 3 38	3,736	Increase, 232	3,070	Increase, 251
1892,	992	9,973	10,965	134 22	Increase, 16 15	46 52	Decrease, 1 65	4,059	Increase, 323	3,267	Increase, 197

The decrease in the number of male teachers noted in last year's report is continued the present year. The increase in the number of female teachers is constant. There has been at the same time an increase in the average wages of male teachers, with a decrease in those of females. It would add greatly to the effectiveness of the schools could there be an increase in the number of well-educated, able men employed, especially in the higher grades of instruction. The introduction within the past two or three years of superintendents, most of whom are men of experience, in the schools of the country towns, more than compensates for the decline in the number of male teachers. The superintendents are, in a sense, teachers; they are teachers of teachers, and as such exert a potent influence in the school instruction and administration. The decline, trifling though it is, in the wages of our female teachers, is incident to the abundance of young women who temporarily enter upon teaching as a respectable and easily accessible occupation.

It is a great misfortune to the schools that about fifteen hundred raw recruits annually enter the corps of public school teachers. The time long since passed when it should be possible for a person to enter the ranks without special training, successful practice under searching criticism, and certification for the work by competent authorities. When such requirements are made imperative, the supply will no longer exceed the demand; then wages for teaching will rise to the level of those paid for clerical work and for other professional service.

I recommend the enactment of a law which shall make it a requisite to teaching (1) that there shall be some special preparatory training, (2) that a certificate of qualifications shall be furnished by some other person than the local authorities, with the provision that such certificate may be accepted in lieu of a certificate by local boards of school committees.

For the training of teachers we have normal schools and training schools and classes. The whole number of different teachers employed during the year is 10,965; of this number 3,267 are normal graduates, 4,059, including graduates, have attended normal schools for longer or shorter periods of time, and probably 1,000 to 1,200 additional teachers have been members of training schools or classes. This leaves over fifty

per cent. who had no systematic instruction for their professional work before entering upon it; and of these from one-fourth to one-third are new to the business, with little or no knowledge of the science of teaching, and with all their skill in the art yet to acquire.

Should the recommendations concerning the qualifications and certificating of teachers be substantially adopted, the means for professional training would need to be greatly enlarged. It would be necessary to fix some future date when such new law should be fully operative.

#### TIME THE SCHOOLS ARE KEPT.

*X. Table showing the Length of Time in Months the Schools were kept during Each Year from 1883 to 1892, a Period of Ten Years.*

	Average Number of Months and Days the Schools were kept.		Average Number of Months and Days the Schools were kept.
1883, . . . .	8-18	1888, . . . .	8-9
1884, . . . .	8-19	1889, . . . .	8-11
1885, . . . .	8-3	1890, . . . .	8-17
1886, . . . .	9-4	1891, . . . .	8-9
1887, . . . .	8-12	1892, . . . .	8-11

The schools of the State were kept on an average eight months and eleven days, two days more than the average of the previous year, but two days less than that for a period of ten years. The value of the school does not depend necessarily upon its length; there is, however, a limit to the time in which the work demanded of the schools can be properly done, and for the mass of the children the time is at present too short. It should be extended so that, with the shortening of the daily sessions which has already taken place, it would be for all children thirty-six weeks, and for advanced classes three-fourths of the year. In some of the larger towns and cities vacation schools are maintained; their establishment has the effect of extending the school time. We would like to see these made a part of the public school system, so that the great number of children who cannot legally be employed upon wages, together with those who would not otherwise be

employed at all, might be under systematic instruction for a portion of each day during the long vacation. Schools that are maintained for this purpose as a charity commend the plan by their excellent results.

The time the law requires all the schools to be kept is six school months, or twenty-four weeks. The period is extended to forty weeks for the high schools. The towns that failed to keep some of their schools six months during the last year are shown in the following table : —

*XI. Table showing the Towns that have not kept their Schools Six Months during the Year, the Number of Schools not so kept, and the Average Time of keeping the Schools as a Whole in These Several Towns.*

COUNTIES.	TOWNS.	Number of Schools.	Average Length of Schools of Town.
Barnstable, . .	Chatham, . . . 1	1— 1	8 mo. 11 days.
Berkshire, . .	Florida, . . . .	1	6 “ —
	Lanesborough, . .	1	7 “ 15 “
	New Marlborough, .	1	8 “ 14 “
	Otis, . . . . 4	1— 4	5 “ 17. “
Bristol, . . . .	— . . . . 0	0	— —
Dukes, . . . .	— . . . . 0	0	— —
Essex, . . . .	Beverly, . . . . 1	1	10 “ —
Franklin, . . . .	Conway, . . . .	2	6 “ 12 “
	Leyden, . . . .	1	7 “ 5 “
	New Salem, . . .	1	6 “ 15 “
	Orange, . . . . 4	3— 7	8 “ 8 “
Hampden, . . . .	Blandford, . . . .	1	6 “ 3 “
	Chester, . . . .	1	7 “ 6 “
	Ludlow, . . . .	1	8 “ 10 “
	Westfield, . . . . 4	1— 4	8 “ 18 “
Hampshire, . . . .	Belchertown, . . . .	1	7 “ 3 “
	Enfield, . . . .	2	7 “ 1 “
	Granby, . . . .	2	8 “ 8 “
	Ware, . . . . 4	2— 7	9 “ 10 “
Middlesex, . . . .	Ashby, . . . .	1	5 “ 10 “
	Dracut, . . . .	2	7 “ 6 “
	Lincoln, . . . .	1	8 “ 18 “
	Pepperell, . . . .	1	9 “ 18 “
	Sherborn, . . . .	1	8 “ 2 “
	Watertown, . . . . 6	1— 7	9 “ —
Nantucket, . . . .	— . . . . 0	0	— —
Norfolk, . . . .	Foxborough, . . . . 1	1— 1	8 “ 7 “

TABLE XI—*Concluded.*

COUNTIES.	TOWNS.	Number of Schools.	Average Length of Schools of Towns.
Plymouth, . . .	Bridgewater, . . .	1	9 mo. 7 days.
	Lakeville, . . .	1	8 " -
	Mattapoisett, . . .	1	8 " 2 "
	Plympton, . . . 4	1—4	7 " 9 "
Suffolk, . . .	- . . . 0	0	- -
Worcester, . . .	Gardner, . . .	1	8 " 4 "
	Hubbardston, . . .	1	7 " 8 "
	Oxford, . . .	1	8 " 9 "
	Paxton, . . .	1	6 " 16 "
	Petersham, . . .	1	7 " 10 "
	Philipston, . . .	1	6 " 14 "
	Rutland, . . .	1	6 " 5 "
	Southbridge, . . .	8	7 " 11 "
	Sturbridge, . . .	1	8 " -
	Templeton, . . .	1	7 " 9 "
	Warren, . . .	2	8 " 15 "
	Webster, . . . 12	2—21	8 " -
	Totals, . . . 40	56	

The above table shows an increase of three in the number of towns some of whose schools have not been kept six months. It shows an increase of thirteen in the number of schools not kept six months. With some there may have been a want of compliance with the spirit of the law; but it will be observed that two only failed to keep their schools as a whole an average of six months, while thirty-two of the remaining thirty-eight kept them an average above seven months, and a majority of them above nine months.

The fact is that in the process of consolidation of schools, which is now meeting with favor, it is found possible and desirable to close the small schools in rural districts, and this accounts for the greater part of the schools that have not been kept six months. So that what without explanation would indicate a decline of interest in keeping up the public schools shows a more intelligent understanding of the difference between good and poor schools, and a willingness to make all needful sacrifices to secure the former. In one instance, in the town of Southbridge, eight public schools were discontinued by the withdrawal of children to attend the parochial school established in the town during the year.



## HIGH SCHOOLS.

*XII. Table Showing the number of High Schools in the State for Ten Years, from 1883 to 1892, with the Number of Pupils attending, also their Ratio to the Whole Number of Children in all the Schools.*

YEAR.	Schools.	Pupils.	Ratio of Pupils in H. S. to School Enrolment.	YEAR.	Schools.	Pupils.	Ratio of Pupils in H. S. to School Enrolment.
1883, .	226	18,423	.057	1888, .	230	22,785	.063
1884, .	228	20,012	.058	1889, .	236	24,139	.066
1885, .	224	20,489	.063	1890, .	241	25,317	.068
1886, .	224	21,370	.061	1891, .	244	26,294	.069
1887, .	229	22,406	.063	1892, .	245	27,482	.071

The above table shows an attendance upon the high schools of 27,482 students, which is an increase for the year of 1,188. The town of Dover for the first time reports a high school. Under the law approved April 30, 1891, any town not required by law to maintain a high school is required to pay for the tuition of any child who with the parent or guardian resides in said town and who attends the high school of another town or city, provided the parent or guardian of such child before such attendance obtains the approval of the school committee of the town in which the child and parent or guardian reside. It may be expected that the application of this law will have the effect to reduce the number of high schools in the class of towns for which it provides. It is desirable that such shall not be the effect. It certainly was not contemplated in enacting the law. Some towns are known to have availed themselves of its provisions, but no high school has been given up on account of it.

The ratio of attendants upon the high schools to the whole school membership is 7.1 per cent. This is two-tenths of one per cent. higher than at any former period in the history of high schools.

In several towns secondary instruction is provided for those students who would otherwise be in high schools, by the towns paying their tuition in academies. In some towns special provision has been made by the founders of the academies for furnishing secondary instruction to the children of these towns. Such is the case at Winchendon, Fall River, Fairhaven, Fal-

mouth and Newburyport. This kind of instruction is now available and free to nearly the whole school population of the State.

The system of promotion employed in recent years in the city grammar schools enables many of their pupils to graduate at an earlier age than formerly. Again, the grammar school course has for several years been shortening through curtailing some of the studies. The changes have the effect of increasing the number admitted to the high schools. The town of Concord has ten per cent. of its school children enrolled in the high schools. If these changes make way for some additional studies in grades below the high school, the gain to the children will be a full equivalent to an increase of attendants upon the schools for secondary instruction. Milton says, "I care not how late I come into life, only that I come fit."

It is of much greater importance that the scholarship shall be improved in both grammar and high schools than that the latter shall show a large increase in attendance.

*XIII. Table showing the Distribution of the High Schools among the Several Counties of the State, with the Ratio of Population having Access to High Schools.*

COUNTIES.	Number of Towns in County.	Number of Towns required to keep High Schools.	Number of Towns having High Schools.	Number of High Schools.	Ratio of Population having Access to High Schools.
Barnstable, . . . .	15	9	10	10	86.1 per cent.
Berkshire, . . . .	32	7	13	15	85.7 "
Bristol, . . . .	20	10	11	11	93.0 "
Dukes, . . . .	7	—	1	1	26.4 "
Essex, . . . .	35	23	27	28	97.2 "
Franklin, . . . .	26	4	7	8	62.3 "
Hampden, . . . .	22	8	9	10	90.0 "
Hampshire, . . . .	23	6	10	11	81.8 "
Middlesex, . . . .	54	30	47	47	97.1 "
Nantucket, . . . .	1	1	1	1	100.0 "
Norfolk, . . . .	27	19	24	26	96.9 "
Plymouth, . . . .	27	13	18	18	90.7 "
Suffolk, . . . .	4	3	4	14	100.0 "
Worcester, . . . .	59	31	43	45	93.8 "
	352	164	225	245	94.4 Average.

An effort was made by the Massachusetts Teachers' Association the present year to obtain statistics (1), concerning the length in years of the course of studies below the high school; (2), concerning the age at which pupils graduate from the course. A committee appointed for this purpose reported items which are of sufficient importance to be preserved in permanent form. Hence the following table:—

XIV. Table Showing the Length in Years of Courses of Studies below the High School, also the Average Ages of Pupils at the Time of Completing These Courses.

NUMBER OF TOWNS REPORTING.			Length of Course.	GRADUATES.						PERCENTAGE OF GRADUATES COMPLETING COURSE IN					
In Part.	In Full.	Number.		AGE.					6 Years.	7 Years.	8 Years.	9 Years.	10 Yrs.	10 Yrs.+	
				Average.	16 Yrs.+	14 Yrs.—	Oldest.	Youngest.							
		Years.	Per Cent.	Yrs. Mos.	Per Cent.	Yrs. Mos.	Yrs. Mos.								
51	38	9	1,950	15 2	18	15	20 1	10 0	3	6	19	35	27	10	
33	17	8	402	14 3½	6	30	—	—	1	9	37	30	17	6	
5	1	10	29	15 2	17	7	—	—	—	3	28	38	25	6	
—	1	7	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Summary.</i>			—	15 1	22	15	—	—	—	—	—	—	—	—	
Cities and large towns,			—	14 3	8	37	—	—	—	—	—	—	—	—	
Smaller towns, . . .			—	—	—	—	—	—	—	—	—	—	—	—	
<i>Special Places.</i>			—	—	—	—	—	—	—	—	—	—	—	—	
Boston, . . . . .			9	15 5	—	—	—	—	—	—	—	—	—	—	
Cambridge, . . . . .			9	15 4	23	20	15 4	13 4	—	10	27	45	17	1	
Milton, . . . . .			—	—	—	—	—	—	—	—	—	—	—	—	
Quincy, grammar schools:			—	—	—	—	—	—	—	—	—	—	—	—	
No. 1, . . . . .			—	14 0	—	—	—	—	—	—	—	—	—	—	
No. 2, . . . . .			—	14 5	—	—	—	—	—	—	—	—	—	—	
No. 3, . . . . .			—	14 5	—	—	—	—	—	—	—	—	—	—	
No. 4, . . . . .			—	14 8	—	—	—	—	—	—	—	—	—	—	
No. 5, . . . . .			—	14 9	—	—	—	—	—	—	—	—	—	—	
No. 6, . . . . .			—	14 9	—	—	—	—	—	—	—	—	—	—	
Somerville, . . . . .			—	—	29	9	18 4	12 11	—	—	—	—	—	—	
Springfield, . . . . .			—	—	37	5	18 4	12 3	—	—	—	—	—	—	

Though these statistics are incomplete, they give definite information upon some important matters pertaining to the course of studies. They show : 1. That there is a wide range in the time deemed necessary to prepare for the high school,—extending from seven to ten years ; 2. That the greater part of the towns have a nine years' course of studies below the high school. Also, that a considerable number have courses covering eight years ; 3. That, whichever course is adopted, about the same proportion of the pupils require nine years to complete it,—30 per cent. under an eight years' course, 35 per cent. under a nine years' course, and 38 per cent. under a ten years' course.

The average age of graduates from the ten and from the nine years' course is the same,—fifteen years and two months. The average age of graduates from the eight years' course is fourteen years, three and a half months. This seems to be a saving of ten and a half months in the time of preparation for the high school, occasioned by shortening the course one year ; but the data are not sufficient to warrant this inference. To make it, we must compare the courses and learn the results of the one and the other in knowledge, amount and kind, and in discipline. We must know whether one reaches up and takes on a year of high school work, and whether the other leaves a year of grammar school work to be done by the high school. It is well known that no uniform standard exists for admission to different high schools. The average age of graduation from grammar schools in cities and larger towns is fifteen years and one month, while the average of those graduating from these schools in small towns is fourteen years and three months. This difference of ten months is undoubtedly due to the more extended courses and more thorough teaching in the schools of the cities and larger towns. It is stated in the report of the committee that some of the smaller towns have a five years' course in the high school. The usual course in the cities and large towns covers four years. Some have special courses which can be completed in three years. As the report says, "The difference in the average age of the graduates in these two classes of towns is more apparent than real." With no general agreement in regard to what constitutes preparation for the high school, statistics concerning the length of courses

of studies and the average age of pupils completing them have a variable and uncertain value.

The report records the percentage of pupils in grammar schools over sixteen years of age, and suggests that the age of the pupils is of less consequence than the work assigned. "If the pupils sixteen years of age are kept at work term after term upon subjects appropriate to children ten years of age, there is cause for complaint." "It is claimed," the report says, "that in some schools the pupils sixteen, seventeen and eighteen years of age are crowded out of the grammar schools before they can reach the ninth year, while in other schools an earnest effort is made to retain these older pupils as long as possible."

This report shows that different grammar schools in the same city graduate their pupils at an average age varying from a few months to several years. The difference in the average graduating age in five schools in Quincy was but four months.

#### EVENING SCHOOLS.

*XV. Table giving the Number of Towns that have maintained Evening Schools for a Period of Ten Years, from 1883 to 1892; also the Number of Such Schools, with the Attendance and the Expense of supporting them.*

YEAR.	Number of Towns.	Number of Schools.	ATTENDANCE.			Per Cent. of Attend- ance.	Expense.
			WHOLE NUMBER ATTENDING.		Average.		
			Males.	Females.			
1883, . . . .	37	111	8,599	2,513	5,613	50	\$59,744 54
1884, . . . .	38	125	10,503	2,748	6,975	52	72,498 94
1885, . . . .	38	142	12,104	3,318	8,447	54	90,124 59
1886, . . . .	40	138	12,106	8,498	8,254	53	94,906 14
1887, . . . .	41	154	12,417	3,264	7,986	51	95,081 56
1888, . . . .	50	214	17,364	7,351	12,823	51	112,873 75
1889, . . . .	51	240	17,208	6,424	12,598	53	127,942 05
1890, . . . .	52	201	17,928	6,892	13,972	51	138,732 02
1891, . . . .	55	266	21,131	7,322	14,526	51	151,279 24
1892, . . . .	55	255	22,340	6,881	15,287	52	131,557 63
Average, . . . . .						52	



The number of towns keeping evening schools is the same for the present and for the past year. A few additional towns entered the list, and a few dropped out. The number of schools decreased by eleven. The city of Haverhill reports eleven in place of four last year, an increase of seven; Fitchburg five in place of three; while Fall River reports forty-five in place of forty-nine, a decrease of four; and Lawrence four in place of nineteen, a decrease of fifteen. It is possible that the decrease and increase result from a different notion of what constitutes a school, whether it be a group of classes in one building or the several classes keeping separate registers. There has been an increase in the numbers attending the schools as a whole, with a larger proportional increase in the average attendance. No gain is made, however, in the ratio of the average attendance to the whole number; this remains at the low figure of 52 per cent., a very unsatisfactory showing for the liberal support given to the schools and for the fostering care they receive.

The amount expended for the maintenance of the schools was \$131,557.63, which is less than for the previous year by \$19,721.61. While the number of teachers employed remained about the same, there was a considerable shortening in the number of evenings the schools were kept; this amounted to 897 evenings.



## AMOUNT EXPENDED FOR THE MAINTENANCE OF PUBLIC SCHOOLS.

## XVI. Table showing the Appropriations and Expenditures for the Ten Years from 1882 to 1892.

	Amount raised by Taxes and expended for Wages and Board of Teachers, Janitors and Fuel.	Amount received from All Sources, exclusive of Appropriations for Buildings and Repairs.	For Each Child in the State between 5 and 15 Years of Age.	Whole Amount expended for all School Purposes.	For Each Child in the State between 5 and 15 Years of Age.	Ratio of Valuation appropriated to Public Schools.
1882-83, . . . . .	\$4,339,378 12	\$4,948,777 11	\$15 02	\$5,813,186 02	\$17 64	.00345
1883-84, . . . . .	4,524,371 03	5,180,661 93	15 40	6,502,359 24	19 34	.00375
1884-85, . . . . .	4,675,882 44	5,631,584 62	16 38	7,020,430 00	20 42	.00399
1885-86, . . . . .	4,817,429 01	5,676,969 08	16 28	7,151,075 38	20 44	.0041
1886-87, . . . . .	5,059,939 43	5,857,321 00	16 59	7,000,083 52	19 82	.00378
1887-88, . . . . .	5,114,402 41	5,934,198 59	16 50	7,087,206 42	19 71	.00366
1888-89, . . . . .	5,366,605 29	6,203,390 55	16 87	7,510,718 85	20 42	.00376
1889-90, . . . . .	5,524,882 65	6,415,444 51	17 33	8,286,062 39	22 38	.00399
1890-91, . . . . .	5,707,514 37	6,652,972 67	17 67	8,554,545 57	22 72	.00397
1891-92, . . . . .	5,578,950 29	6,668,690 93	17 41	9,315,556 55	24 32	.00414

*Distribution of Expenditures.*

The amount raised by taxation and expended for the support of schools for the year 1891-92 was \$5,578,950.29. The items included under the term "support of schools" embrace those expenditures which are constant and necessary to the keeping of a school; namely, the wages of teachers and janitors of buildings, and the cost of fuel.

The sum raised by taxation and expended upon school-houses, including (1) ordinary repairs, (2) alterations and permanent improvements, (3) new buildings, for the year, was \$2,646,865.62.

Another class of expenses met by taxation includes the cost of text-books and other means used in study and teaching, \$532,530.73; cost of printing reports, etc., \$12,165.59; and money paid for the supervision of schools, \$249,699.96,—amounting to \$794,319.28.

Including the voluntary contributions, the income of local funds, of the surplus revenue, of the State school fund and the dog tax, some of which items it is at the option of the towns to apply to other purposes, the schools have received \$371,118.17, for which there has been no tax levy.

The sum for which taxes were levied, and which was applied directly to the support of schools, is slightly less the present than the last year. The amount received from all sources and applied to the schools, exclusive of appropriations for buildings and repairs, was \$6,668,690.93; this is a slight increase over the corresponding amount of last year; it allows \$17.41 to each child in the State between five and fifteen years of age. If we add to the above sum the school-house expenditures, the whole sum expended for all school purposes is \$9,315,556.55, which equals \$24.32 per child between five and fifteen years of age. This is at the rate of 4.14 mills on one dollar of the taxable property of the State. The total sum, the rate per child, and the tax rate, are greater than ever before. They are not greater, however, than is warranted by our increase in wealth and population. Such an appropriation of public money shows the readiness of the people to make liberal provision for the health, comfort and convenience of the children and teachers, and a determination to afford the schools every needed facility for doing their best work.

## EXPENSES OF REPAIRING AND BUILDING SCHOOL-HOUSES.

When Horace Mann began his work as secretary of the Board, the school-houses of the State were in a deplorable condition. There were no well-appointed, first-class school-houses for public schools. In a supplement to the first annual report Mr. Mann enumerates the qualities necessary in a good school-house; in his third report he speaks of the school-houses as being uncomfortable, dangerous to health, unsightly and repulsive. Of the twelve schools then erecting in Boston, one was to cost, by estimate, twenty thousand dollars! He says, "leaving the city of Boston out of the account, it would be easy to select a hundred churches, which the parents have built for themselves, worth all the three thousand school-houses in the State, collectively, which they have built for the children." In the seventh annual report, 1844, he states that the amount expended for erecting and improving school-houses during the five previous years was \$634,326.80. The expenditure in a few towns not heard from would swell this amount to \$650,000. "If we leave out the single city of Boston, the above expenditure," he says, "is doubtless greater than the whole value of all the school-houses in the State at the time of the organization of the Board." In his twelfth annual report, 1849, he says, "the value of the school-houses owned by the public is \$2,552,213;" this according to reports received from the towns in the spring of that year. Comparing this with the larger sum expended for a like purpose in the single year 1891-92, we get some conception of the development which has been going on within a period of about forty years in material and in school interests. The present value of school property, as reported by the town assessors, is \$28,500,000. The present enlightened public sentiment regarding the sanitation of school-houses is due in great part to the legislative enactment which created within the State police a department for the inspection of public buildings.

*Expense of Text Books and Supplies.*

XVII. Table showing the Sum appropriated and the Rate per Scholar, for the past Ten Years, for Books, Stationery, Maps, Charts, etc.

YEAR.	Total expense of Books, etc.	Expense of Books, etc., per Pupil.	YEAR.	Total expense of Books, etc.	Expense of Books, etc., per Pupil.
1882, .	\$227,604 18	\$0 84	1887, .	\$428,736 05	\$1 49
1883, .	253,537 61	91	1888, .	427,155 56	1 42
1884, .	588,760 38	2 08	1889, .	469,924 02	1 54
1885, .	488,210 44	1 69	1890-91, .	494,545 27	1 60
1886, .	424,697 29	1 45	1891-92, .	532,530 73	1 70
Average for 8 years, . . . . .					1 62

Under the free text-book law the cost of books and of supplies, such as paper, slates, pencils, pens, etc., is for the year \$532,530.73, which is an increase for this period of \$37,-985.46, — a sum which, distributed equally among the 6,231 pupils, the increased membership in the schools, would average \$6.09 per pupil. Taking all the pupils enrolled in the schools, the entire tax for books and supplies averaged \$1.70 per pupil. The average for the eight years since the enactment of the law is \$1.62 per annum for each child.

The increase from year to year is incident to an increased demand for these necessary means for carrying on the school work. It is a sign of greater skill in teaching to see an increased demand for more and better tools to work with. There is, moreover, observable in school committees a disposition to meet this demand with a spirit of liberality, and to provide new books before the old ones become tattered and untidy, and to make provision for other materials in abundance and of good quality.

## EXPENSE OF CONVEYING CHILDREN.

XVIII. Table showing the Amount expended for transporting Children to School for the past Four Years.

YEAR.	Sum expended.	YEAR.	Sum expended.
1888-89, . . .	\$22,118 38	1890-91, . . .	\$30,648 68
1889-90, . . .	24,145 12	1891-92, . . .	38,726 07

The year 1888-89 was the first year that the amount expended for the transporting of children to school was introduced into the statistics of the Board.

A law approved April 1, 1869, provided that any town in the Commonwealth may raise by taxation or otherwise and appropriate money to be expended by the school committee in their discretion, in providing for the conveyance of pupils to and from the public schools.

Though this law was enacted early in 1869, it had but a limited application till within a few years. It was at once applied to the conveyance of pupils to the high schools, but its first application on a large scale was in the town of Concord, ten or twelve years ago. The plan of consolidating schools, now being extensively adopted in the towns of rural populations, is the occasion for the increased expense for this purpose reported in recent years. The increase for the past three years respectively is \$2,026, \$6,503 and \$8,077. The total expenditure for the year 1891-92 is \$38,726.07. Under the law it is necessary that the towns vote not merely to instruct the committee to have the children conveyed; they must also vote the necessary appropriation for the service. No school money gives a more abundant return than that employed in consolidating small schools and in giving to the children ready access to those which admit of more perfect organization and better supervision.

#### EXPENSE OF SUPERVISION.

XIX. *Table showing the Expense of Supervision, both by School Committees and by Superintendents, for Seven Years, from 1885.*

	EXPENSE OF SUPERVISION.		
	By School Committees.	By Superintendents.	Total.
1885, . . . . .	\$114,311 77	\$87,918 59	\$202,230 36
1886, . . . . .	106,412 26	94,060 29	200,472 55
1887, . . . . .	112,926 60	96,831 28	219,757 88
1888, . . . . .	112,772 53	101,324 90	214,107 43
1889-90, . . . . .	112,649 15	114,993 28	227,642 43
1890 91, . . . . .	110,038 84	135,124 79	245,163 63
1891-92, . . . . .	96,491 48	153,208 48	249,699 96

The present cost of supervision by both school committees and superintendents is \$249,699.96, an increase of \$22,057.53, since the enactment of the law of 1888, which has resulted in a large increase in the number of superintendents employed. The average increase per year for the three years the law has been in operation is \$7,352.51. Before this law was enacted, in the year 1887-88, the increase was more than twice this sum. We believe so large an outcome for so small an investment never before did accrue to the benefit of the schools of the small towns.

It would be the part of wisdom for the Legislature to provide, in the law referred to above, for an increase of \$250 in the minimum salary paid to the district school superintendents; it is now \$1,250. This advance would tend to give greater permanence to the office, and attract to it persons of larger experience than it has hitherto been able to command and retain.



## SUPERVISION BY SUPERINTENDENTS.

XX. Table showing by Counties the Number of Towns and Cities, Schools and Children, also the Ratio of Schools and Children under Superintendents.

COUNTIES, 1891-92.		NUMBER OF TOWNS NOT HAVING SUPERINTENDENTS.		NUMBER OF TOWNS WHICH EMPLOY SUPERINTENDENTS.				SCHOOLS.		CHILDREN.	
		Number.	Per Cent.	UNDER LAWS.		Total Towns.		Number.	Per Cent.	Number.	Per Cent.
				1854.	1870.						
Barnstable, .	. . . . .	5	33.3	3	0	7	10	128	79.0	4,202	81.4
Berkshire, .	. . . . .	17	51.5	4	0	11	15	220	61.2	11,399	72.0
Bristol, .	. . . . .	8	40.0	8	0	4	12	527	85.4	29,062	11.8
Dukes, .	. . . . .	7	100.0	0	0	0	0	0	0.0	0	00.0
Essex, .	. . . . .	23	65.7	10	2	0	12	676	67.8	33,098	74.8
Franklin, .	. . . . .	14	53.8	0	0	12	12	96	36.7	2,486	33.4
Hampden, .	. . . . .	12	54.4	4	0	6	10	344	73.1	17,624	80.1
Hampshire, .	. . . . .	13	56.5	5	0	5	10	150	53.3	5,236	55.8
Middlesex, .	. . . . .	10	18.5	22	6	16	44	1,173	82.7	71,652	91.7
Nantucket, .	. . . . .	1	100.0	0	0	0	0	0	0.0	0	00.0
Norfolk, .	. . . . .	8	29.6	11	1	7	19	388	77.1	17,137	76.5
Plymouth, .	. . . . .	13	48.1	7	1	6	14	283	69.7	12,525	76.0
Suffolk, .	. . . . .	1	25.0	3	0	0	3	679	98.4	75,088	99.3
Worcester, .	. . . . .	9	15.2	13	2	35	50	1,064	93.2	49,320	96.3
Totals, .	. . . . .	142	40.3	89	12	109	210	5,728	78.0	329,029	85.8

The above table shows a decrease in the number of towns depending wholly upon school committees for the supervision of their schools, and a corresponding increase in towns employing superintendents. The laws enacted in 1854 and 1870, though differing in intent, are alike in effect. Under the first law each town is authorized to employ a superintendent of schools; under the second, two or more towns may jointly employ a superintendent. As operated in each case the town votes to employ a superintendent; the school committee executes the vote of the town; whether the superintendent has another town, it matters not; the contract is between him and the school committee,—so much service, so much pay. Unless the town votes pay to the school committee under these laws, the board serves without compensation. This provision has had the effect, it may be believed, to retard somewhat the application of these laws. To secure the office and still retain compensation for their services, the committee of one town makes the principal of the high school a superintendent by electing him to be principal of all the schools of the town.

The law of 1888 requires that the towns that jointly employ a superintendent shall be organized for this purpose into a superintendent district. The committees of the several towns are required to meet in convention and elect a chairman and secretary, who constitute the executive officers of the convention. A superintendent being elected and his time and salary being apportioned among the towns, he thenceforth acts as independently in each town as if it alone were the extent of his operations. Under this law the school committee are expected to receive compensation for their services. Not only is this provision made, but the State contributes one thousand dollars to the towns in aid of the superintendency district. The result of this most wise and liberal enactment is that thirty-six school superintendents are actively engaged, where three years ago the schools were entirely superintended by school committees.

Superintendents are now employed in 210 of the 352 towns and cities of the State; 89 are under the law of 1854, 12 under that of 1870, and 109 under that of 1888. Of the whole number of public schools, 78 per cent. are in charge of these officers; of the whole number of children enrolled in the

schools, 85.8 per cent. are in their charge. Included in the above towns are a few whose superintendence is little more than nominally by superintendents. With these few exceptions, the service is professional; that is, the superintendent is himself a practical teacher, has studied the science and art of teaching, and is devoting his time exclusively to this service.

Some recommendations looking to modifications in the law of 1888 were made in the fifty-fifth annual report. Special laws were enacted by the last Legislature, enabling certain towns having less than thirty schools to form a superintendent district. Such special enactments would be rendered unnecessary by giving to the Board of Education limited discretionary power in certain contingencies liable to arise under the law.

The time has arrived when the interest of the State in the education of the children should be expressed by the enactment of a law which shall require the superintendency form of supervision in every town. This proposition is recommended to the Legislature for serious consideration.

#### TEACHERS' INSTITUTES.

The number of teachers' institutes held during the year 1891-92 was twenty-five, located as follows:—

*XXI. Table showing the Location of Institutes, the Date of holding, the Number of Towns represented and Persons attending, with the Number of Exercises conducted.*

WHERE HELD.	Date.	Number of Towns represented.	Number of Members.	Number of Exercises.	By whom Conducted.
Ashburnham, . . .	Nov. 4,	5	103	6	A. W. Edson.
Bellingham, . . .	Oct. 12,	6	99	7	John T. Prince.
Bourne, . . .	Dec. 9,	4	55	7	George A. Walton.
Cambridge, . . .	Dec. 13,	1	270	8	George A. Walton.
Charlemont, . . .	Oct. 7,	4	25	7	G. T. Fletcher.
Chester, . . .	Nov. 2,	8	49	6	A. W. Edson.
Clinton, . . .	Oct. 7,	10	129	11	A. W. Edson.

TABLE XXI. — *Concluded.*

WHERE HELD.	Date.	Number of Towns rep- resented.	Number of Members.	Number of Exercises.	By whom Conducted.
Dalton, . . .	Sept. 30,	5	45	7	G. T. Fletcher.
Freetown, . . .	Oct. 5,	7	44	8	John T. Prince.
Hubbardston, . . .	Dec. 14,	4	52	6	A. W. Edson.
Hyannis, . . .	Oct. 26,	10	93	13	George A. Walton.
Maynard, . . .	Nov. 18,	8	139	8	George A. Walton.
Monterey, . . .	Oct. 14,	5	35	7	G. T. Fletcher.
New Salem, . . .	Oct. 19,	3	15	7	G. T. Fletcher.
Northampton, . . .	June 29 to July 5,	45	150	37	G. T. Fletcher.
North Attleborough, . . .	Oct. 3,	5	110	7	John T. Prince.
Palmer, . . .	Sept. 28,	7	128	11	A. W. Edson.
Petersham, . . .	Nov. 10,	3	34	6	A. W. Edson.
Townsend, . . .	Oct. 24,	9	98	10	George A. Walton.
Uxbridge, . . .	Oct. 14,	8	98	11	A. W. Edson.
Walpole, . . .	Sept. 30,	5	70	7	John T. Prince.
Webster, . . .	Nov. 16,	4	54	6	A. W. Edson.
Westborough, . . .	Sept. 23,	6	60	6	A. W. Edson.
Wilbraham, . . .	Nov. 3,	4	70	6	A. W. Edson.
Woburn, . . .	May 6,	9	159	15	George A. Walton.
Total, . . . 25		185	2,184	230	

The number of towns represented in all the institutes is 185; the number of teachers and school officers present amounts to 2,184. The distribution of the membership among the towns is shown by the following table: —

XXII. *Table giving the Names of the Towns represented in the Institutes, with the Number of Persons attending from Each Town.*

TOWNS.	Number of Persons.	TOWNS.	Number of Persons.
Acton, . . . . .	15	Enfield, . . . . .	1
Agawam, . . . . .	10	Falmouth, . . . . .	15
Amherst, . . . . .	4	Fitchburg, . . . . .	1
Ashburnham, . . . . .	47	Florida, . . . . .	1
Ashley, . . . . .	11	Foxborough, . . . . .	13
Ashfield, . . . . .	4	Franklin, . . . . .	26
Athol, . . . . .	1	Freetown, . . . . .	8
Attleborough, . . . . .	36	Gardner, . . . . .	33
Auburn, . . . . .	3	Gill, . . . . .	4
Ayer, . . . . .	12	Grafton, . . . . .	1
Barnstable, . . . . .	25	Granby, . . . . .	3
Barre, . . . . .	9	Great Barrington, . . . . .	3
Becket, . . . . .	6	Greenfield, . . . . .	3
Bedford, . . . . .	5	Groton, . . . . .	20
Belchertown, . . . . .	8	Hadley, . . . . .	5
Bellingham, . . . . .	10	Hampden, . . . . .	4
Berkley, . . . . .	5	Harvard, . . . . .	2
Berlin, . . . . .	5	Hardwick, . . . . .	2
Bernardston, . . . . .	2	Harwich, . . . . .	9
Billerica, . . . . .	10	Hatfield, . . . . .	5
Blackstone, . . . . .	25	Hawley, . . . . .	3
Blandford, . . . . .	8	Heath, . . . . .	5
Bolton, . . . . .	6	Hinsdale, . . . . .	11
Bourne, . . . . .	24	Holland, . . . . .	2
Boxborough, . . . . .	4	Hubbardston, . . . . .	38
Boylston, . . . . .	2	Hudson, . . . . .	16
Brimfield, . . . . .	7	Huntington, . . . . .	2
Buckland, . . . . .	7	Lakeville, . . . . .	2
Burlington, . . . . .	4	Lancaster, . . . . .	17
Cambridge, . . . . .	270	Lanesborough, . . . . .	8
Charlemont, . . . . .	11	Lee, . . . . .	3
Chatham, . . . . .	9	Leominster, . . . . .	31
Cheshire, . . . . .	9	Leverett, . . . . .	2
Chester, . . . . .	10	Lexington, . . . . .	14
Chesterfield, . . . . .	3	Leyden, . . . . .	3
Clinton, . . . . .	36	Lincoln, . . . . .	5
Colrain, . . . . .	6	Littleton, . . . . .	8
Concord, . . . . .	11	Longmeadow, . . . . .	5
Conway, . . . . .	5	Ludlow, . . . . .	13
Dalton, . . . . .	14	Lunenburg, . . . . .	4
Dana, . . . . .	3	Mansfield, . . . . .	16
Deerfield, . . . . .	4	Marlborough, . . . . .	57
Dennis, . . . . .	10	Mashpee, . . . . .	3
Dighton, . . . . .	11	Mason, N. H., . . . . .	1
Douglas, . . . . .	8	Maynard, . . . . .	15
Dudley, . . . . .	11	Medfield, . . . . .	8
Eastham, . . . . .	2	Medway, . . . . .	20
Easthampton, . . . . .	4	Mendon, . . . . .	8

TABLE XXII. — *Concluded.*

TOWNS.	Number of Persons.	TOWNS.	Number of Persons.
Middleborough, . . . .	9	Somerset, . . . .	8
Middlefield, . . . .	7	Southampton, . . . .	2
Milford, . . . .	32	Southborough, . . . .	9
Millis, . . . .	5	South Hadley, . . . .	2
Monson, . . . .	22	Southwick, . . . .	1
Montague, . . . .	2	Springfield, . . . .	9
Monterey, . . . .	5	Stoneham, . . . .	28
New Marlborough, . . . .	13	Stow, . . . .	6
New Salem, . . . .	9	Sudbury, . . . .	8
Norfolk, . . . .	6	Sunderland, . . . .	2
North Adams, . . . .	2	Templeton, . . . .	11
Northampton, . . . .	18	Townsend, . . . .	14
North Attleborough, . . . .	39	Tyringham, . . . .	5
Northborough, . . . .	8	Upton, . . . .	1
Northbridge, . . . .	24	Uxbridge, . . . .	18
Northfield, . . . .	4	Walpole, . . . .	23
Norwood, . . . .	20	Ware, . . . .	25
Orange, . . . .	1	Warren, . . . .	27
Orleans, . . . .	6	Washington, . . . .	2
Otis, . . . .	8	Webster, . . . .	27
Oxford, . . . .	13	Wellfleet, . . . .	2
Palmer, . . . .	40	Westborough, . . . .	32
Pelham, . . . .	1	West Boylston, . . . .	19
Pepperell, . . . .	17	West Brookfield, . . . .	9
Peru, . . . .	4	Westfield, . . . .	1
Peterborough, N. H., . . . .	5	Westhampton, . . . .	2
Petersham, . . . .	22	Westminster, . . . .	1
Phillipston, . . . .	1	West Stockbridge, . . . .	1
Prescott, . . . .	3	Whately, . . . .	2
Provincetown, . . . .	19	Wilbraham, . . . .	48
Rowe, . . . .	7	Williamsburg, . . . .	6
Royalston, . . . .	2	Wilmington, . . . .	8
Russell, . . . .	4	Winchendon, . . . .	17
Sandisfield, . . . .	3	Winchester, . . . .	25
Sandwich, . . . .	15	Woburn, . . . .	60
Sharon, . . . .	4	Wrentham, . . . .	15
Shelburne, . . . .	6	Yarmouth, . . . .	10
Shirley, . . . .	11	Reported without location, . . . .	37
Shrewsbury, . . . .	9		
Shutesbury, . . . .	3		
Smithfield, R. I., . . . .	1	Total, . . . .	2,184

The plan of organizing the institutes was as hitherto devised by the secretary of the Board, who also determined the course of instruction. The institutes, with one exception, were held for one day, and usually had an evening meeting. The day exercises dealt with the branches of instruction pursued in the schools, and had for their immediate object to stimulate



and instruct the teachers. The evening addresses were of a general educational character, and were directed especially to the citizens of the localities where the institutes were held.

The agents of the Board are charged with the details of arrangement and conduct of the institutes. These consist in distributing them at convenient and desirable points, in arranging with the instructors, in preparing programmes and extending the notice of the time and place of holding, and in caring for the institute while in progress.

*Instruction and Instructors.*

Evening addresses were made by Rev. A. D. Mayo, Rev. T. A. Hinckley, Mrs. Kate Gannett Wells, Mr. A. G. Roe, Mr. E. H. Russell, Mr. J. C. Greenough, Mr. A. C. Boyden, and by the secretary and agents of the Board.

The following is a list of topics presented in the day meetings, with the several persons employed in giving the instruction:—

*Algebra.* — James W. MacDonald.

*Arithmetic.* — A. W. Edson, James C. Greenough, Miss Mary I. Lovejoy, John T. Prince, Miss Jennie M. Skinner, George A. Walton.

*Chemistry.* — Charles E. Adams.

*Civil Polity.* — J. W. MacDonald.

*Color.* — Henry T. Bailey.

*Drawing.* — H. T. Bailey, Miss E. H. Perry, L. W. Sargent.

*English Composition.* — John W. Dickinson.

*English Language.* — George I. Aldrich, G. T. Fletcher, George H. Martin, John T. Prince, Miss Jennie M. Skinner.

*English Literature.* — J. W. MacDonald, George H. Martin.

*Geography.* — Miss M. H. Davis, A. W. Edson, John T. Prince.

*Geometry.* — J. W. MacDonald.

*Grammar.* — G. T. Fletcher, Miss Emma C. Fisher.

*History.* — A. W. Edson, George H. Martin.

*Kindergarten Work.* — Miss Lucy Wheelock.

*Latin Language.* — Isaac B. Burgess.

*Manual Training.* — T. A. Hinckley.

*Nature Studies.* — Arthur C. Boyden, Miss S. E. Brassill, L. W. Sargent.

*Physics.* — C. E. Adams.

*Physiology and Hygiene.* — A. C. Boyden, G. T. Fletcher, F. F. Murdock.

*Preparation for Teaching.* — J. C. Greenough.

*Psychology and Principles of Teaching.* — J. W. Dickinson, J. C. Greenough, A. W. Edson, G. T. Fletcher.

*Reading.* — A. W. Edson, G. T. Fletcher, Miss M. I. Lovejoy, John T. Prince, Miss Jennie M. Skinner, George A. Walton.

*School Management.* — G. T. Fletcher, J. C. Greenough.

*Spelling.* — G. T. Fletcher.

*Writing.* — George A. Walton.

The number of exercises was 230. Six or seven of these were given at each of the ordinary institutes, which were instructed as a single class. The institutes at Cambridge, Clinton, Hyannis, Palmer, Townsend, Uxbridge and Woburn were instructed in separate classes according to the different grades of schools in which the members are engaged, and consequently had a larger number of exercises. The Northampton institute was convened in Laurel Park, and continued for six successive days with an average of six exercises per day.

The recent introduction of nature studies into the schools makes a demand in the institutes for special instruction in these branches. Accordingly more time than usual was given to presenting an outline of topics to be taught in these studies, and to showing a method of teaching them. Drawing also received extra attention the present year. The instruction in free-hand drawing accompanied that in nature studies, and, in general, was directed to the illustration of the different branches taught in the schools.

The institutes were well attended by those invited, and the exercises, so far as known, were highly appreciated by the members and others in attendance. The hospitalities of the citizens were everywhere extended with a spirit of extreme liberality.

### SPECIAL SCHOOLS.

#### EDUCATION OF THE DEAF.

“Every institution for the instruction of the deaf, dumb and blind, when aided by a grant of money from the State treasury, shall annually make to the Board such a report as is required, by sections sixteen and seventeen of chapter twenty-nine, of other private institutions so aided.” (Public Statutes, chapter 41, section 15.)

Deaf pupils are now sent to the Horace Mann School in Boston, to the Clarke Institution at Northampton, and to the American Asylum at Hartford, Conn.

*Deaf Children.**American Asylum, Hartford, Conn., JOB WILLIAMS, M.A., Principal.*

Number of Massachusetts beneficiaries during the school year 1891-92,	74
Number admitted during the year, . . . . .	9
Number in school Jan. 1, 1893, . . . . .	64

The year 1892 has been marked by general good health and prosperity in the school, and there has been a slight increase in the average attendance. The whole number of pupils during the year was 163, — 99 boys and 64 girls. Forty-two boys and thirty-two girls came from Massachusetts.

The general progress of the school has been very satisfactory. No decided change has been made in the method of instruction. New theories and devices are constantly examined and tested, and are freely adopted so far as they prove worthy of adoption. In the instruction given, the English language, in the order of difficulty of its various forms, spelled, written and oral, holds the place of first importance from the beginning to the end of the school course. To master it is the most difficult part of a deaf child's education. The forms of speech which the hearing child acquires almost without effort, through the sense of hearing, a deaf child must gain through careful study of each minute detail, and that through the eye alone unaided by the ear. One who has not had to do with deaf pupils can hardly realize how great the task is. Every study that the deaf child takes up must be made to contribute to this end. Arithmetic, history, geography, physiology and every other subject must furnish careful practice in the English language. To master it is to get possession of the key to the wide stores of knowledge. By it one is brought into ready communication with every intelligent person about him.

The aim is to make all the instruction given in the school as practical as possible; to fit the pupil for usefulness and happiness in the sphere of life which he will be likely to occupy; cultivate his reasoning powers, and to build up a strong moral and Christian character. *Non multa, sed multum*, is the teacher's motto.

Articulation and lip-reading continue to be essential parts of the school curriculum. Every child entering the school is given a thorough and prolonged test as to his ability to acquire

these branches, and the effort is abandoned only when the child fails to give promise of any satisfactory degree of progress. About one-fifth of the pupil's school time is given to these branches, with results gratifying alike to teachers and parents. Some of the parents report that they use no other means of communication with their children when at home on vacation. About seventy per cent. of the pupils are under instruction in these branches.

A very interesting incident of the year was the celebration, in August last, of the seventy-fifth anniversary of the opening of the school. Former pupils, nearly five hundred in number, with a few graduates of other schools, gathered from every quarter of New England, and a few from more distant parts of the country, to do honor to their Alma Mater, and to revisit scenes which some of them had not looked upon for half a century or more. One, a member of the first class taught in the school, had reached the age of ninety-five years, and several had passed the limit of four score years. It was a gathering of intelligent, honest, earnest men and women, respected by all who knew them, who had earned, or were earning, an independent living for themselves and their families. It was an inspiring sight, a product in which the old school might well take pride.

*Clarke Institution, Northampton, Miss CAROLINE A. YALE, Principal.*

Number of Massachusetts beneficiaries during school year 1891-92,	94
Number admitted during present year (Massachusetts),	18
Number present January, 1892 (Massachusetts),	91

The year ending Aug. 31, 1892, was one of gratifying success and prosperity to the Clarke Institution. Its educational work was prosecuted with the increased ability which grows out of experience, and it suffered from no other sickness than two mild cases of scarlet-fever on the part of pupils, and a mild one of pneumonia on the part of a teacher at the very close of the school year. The number of pupils instructed was 118, — boys, 59; girls, 59; in the primary department, 71; in the grammar department, 47; boarding pupils, 115; day pupils, 3. The number present at the close of the school year was 116.

Of the whole number, 94 were from Massachusetts, 7 from Vermont, 6 from New Hampshire, 2 each from New York and

Alabama, and one each from Rhode Island, Connecticut, Pennsylvania, Ohio, Maryland, Georgia and Minnesota.

The number instructed in drawing was 39; in wood carving, 25; in cabinet work, 22. The older girls also received practical lessons in household duties.

Two teachers only left at the end of the year, and their places are believed to have been well filled. None of the pupils figured as graduates at the end of the second session, because only a single member of the oldest class had been with us ten years, and all were advised to remain another year.

The school was honored by an unusual number of visitors during the ten months, and especially by prominent instructors of the deaf, not only those connected with oral schools, but those in which the combined system prevails.

The pupils were more than once subjected to rigid and persistent scrutiny by expert catechisers not prepossessed in favor of the oral system. The results, and comments made thereon, have done much to give *éclat* to the Clarke Institution, and to hasten the prevalence of the system of instruction here pursued. That this system has been eminently successful is further evinced by the recent action of the association to promote the teaching of speech to the deaf. This association held its second annual session at Lake George during the first ten days of July last. About two hundred persons were present. The exercises consisted of lectures on vocal physiology by eminent anatomists, as well as on other practical subjects; an exhibition every afternoon by the teacher and pupils of some oral school, of the method of instruction pursued therein, followed by queries and discussions. By special request of the president of the association, Dr. A. Graham Bell, the Clarke Institution was represented by three pupils from the two classes of one year's standing, with their two teachers. During the ten days the exercises successively practised during the first ten months of school life at the Clarke Institution were successively set forth. The result of this exhibition, together with previous inspections of the school by leading members of the association, was that a resolution was passed requesting the Clarke Institution to admit teachers for other schools to the same preparatory training to which its own teachers are subjected.



The school opened in 1867 with twenty pupils and two teachers; it now contains one hundred and twenty-seven pupils and fifteen teachers. A single school and family embraced all the pupils at that time; now the school is divided into departments, and instead of one home and family there are three, quite separate and distinct, one containing twenty-five young children, another containing about fifty, and a third containing fifty of the oldest and most advanced. By this division and the subdivisions in each family, and by the emphasis laid, from the first, on the importance of household arrangements and of the family life under the care of teachers and playroom attendants, we feel assured that many of the objections to so-called "institution life" are removed. Each teacher and attendant may know intimately every boy and girl under her care, and exercise over each that personal influence which is quite impossible when a larger number is under the care of one person, or where teachers do not live in constant contact with their pupils, directing their reading and conversation, sitting with them at their meals, going familiarly out and in among them. Such family life is more expensive; it is true, but we cannot doubt that it is well worth the cost.

The methods employed in the class-rooms have developed with years of experience and the increased number of pupils under instruction. The school was opened for the benefit of two classes of pupils: "1. Those who are partially deaf. 2. Those who lost their hearing when over four years of age." No provision was made for children wholly deaf from birth, but the fact was that several wholly deaf congenital mutes were admitted the first year. Of all the pupils now members of the school, seventy per cent. were born deaf or became deaf at or before the age of two years, and the same is true of over sixty per cent. of all the pupils ever in the school. Less than twenty-five per cent. of the pupils now in the school retained sufficient hearing or speech on entering to be called semi-deaf or semi-mute. Twenty-five years ago we hoped that remnants of speech left after hearing was lost might be preserved, and that speech might be given to those having some slight power of hearing; now any deaf child is admitted, and the conviction has grown very strong that every deaf child should have the opportunity to learn to speak and to read



from the lips; and, moreover, we have come to believe that even for pupils with imperfect vision lip-reading is no more taxing to the sight than the reading of rapid sign making or manual spelling. For all pupils written language can be used with spoken language, and spoken and written language in the hands of competent teachers seems to us the best and in a vast majority of cases the only necessary means for the education of deaf children.

As to methods of expression, intelligible speech is no doubt incomparably above all others, and even poor speech is quite as intelligible among people in general as manual spelling or signs, however graceful. No one thinks of advising the disuse of the very imperfect speech of the child with cleft palate, — not more intelligible than that of many deaf children. The poor speaker, and the user of signs and the manual alphabet, are alike forced to use writing as a last resort.

The present course of study for the pupils may be briefly outlined as follows: for young children having received no previous instruction a series of carefully planned and graded exercises has been devised. These exercises have for their main purpose the development of attention, observation and imitation, through the exercise of the senses of sight and touch, — the only two of the intellectual senses remaining to deaf pupils. Sight is cultivated through exercises in motion, form, color and number; touch is cultivated by applying it to the perception of form, size, weight, surface, texture and the vibration of strings. The eye is thus trained for quicker acquisition of spoken and written words, and the fingers are trained to detect the delicate vibrations and changes in the throat and mouth, a familiarity with which greatly aids in the acquisition of speech. The foundation of speech is laid in a thorough knowledge of the elementary sounds, not as indicated by diacritical marks, but as determined by their position in words. In this way all the help possible is given the child from the outset for the long struggle with pronunciation which lies before every English-speaking person. The development of language is according to a clearly defined arrangement of grammatical principles. These principles, however, are not given the child as such, but serve as an aid to the teacher in the selection and arrangement of exercises in simple English,—

such natural English as will most readily lend itself to the needs of the child's daily life. This language is at first interpreted to him by the use of objects, actions and pictures. The four or five years of the primary course are devoted almost exclusively to the acquisition of language, numbers and introductory lessons in geography being begun in the third year.

In the grammar school department, arithmetic, geography, history and the natural sciences are taught as nearly as possible according to the best methods employed for their acquisition in ordinary schools. Drawing from casts, and wood carving, are also taught in this department.

The formation of the *speech habit* and the *reading habit* are considered of paramount importance. First, let the child come to spontaneously express himself in spoken language, and look for that in others; and, second, let him be shown the delightful things that are to be found on the printed page. The acquisition and use of language come with the effort of the child to put his own thoughts into words, and to get the thoughts of others from their spoken or written words. Could each child have always by him an enthusiastic and devoted teacher, making language live and real to him every hour of every day, as Helen Keller has had, Helen's rapid acquisition of language would seem less a miracle. Ordinarily, however, it is from the printed page that deaf pupils must acquire the greater part of their language beyond the primary grades and in after school life. It is therefore a chief object with us to induce and foster the reading habit by school-room exercises of various sorts, and by providing the pupils with an abundance of books, magazines and papers carefully selected and suited to each grade. It is, if possible, more true of a reader among those without hearing when compared with his fellow men than of one in the world at large, that "the lover of books is the richest and the happiest of the children of men." This reading habit, too, makes young men and women going out of schools for the deaf more akin to their hearing brothers and sisters; and if with this the speech habit has also been established, these graduates will prove to be the ones not counted on the rolls of membership of deaf-mute societies.

*Horace Mann School, Boston, Miss SARAH FULLER, Principal.*

Number of Massachusetts beneficiaries during the school year 1891-92,	101
Number admitted during the school year 1891-92, . . . . .	24
Number of Massachusetts beneficiaries in the school Jan. 1, 1893, . . . . .	101

On the ninth of September, 1891, the Horace Mann School opened with eighty-five pupils, — forty-one boys and forty-four girls. Twenty-three were admitted during the year, and eight were discharged. Of the latter number, two entered private schools with hearing children. The number at the close of the year in June, 1892, was one hundred. The following extract from the supervisors' report so fully expresses what we would say that we reprint it here : —

“ No Boston public school, whether established for a general or for a special purpose, accomplishes its objects with more skill and thoroughness than the Horace Mann School for the Deaf. In the words of Superintendent Seaver, it ‘ is verily our most precious educational gem.’ An excellent description of its origin and growth, and, incidentally, of the great good it has here, and, through its example, elsewhere accomplished, is given in school document No. 24, 1890. But the description is incomplete. There are indications that the oral method of teaching the deaf in the Horace Mann School is to produce even better results than were anticipated a few years ago.

“ ‘ Visible speech,’ invented in Edinburgh by Alexander Melville Bell after twenty years of study and investigation, and first used in England for instructing the deaf in 1869, was introduced in 1871, through the agency of his son, Alexander Graham Bell, into this school. Here training by means of visible speech has been given for twenty years by Miss Sarah Fuller and her assistants, with results that prove the power and beauty of human skill when directed to noble ends, and when exercised with patience and fidelity.

“ It is, indeed, a great feat for a child who has never heard a sound to communicate orally his thoughts and feelings to members of his family, and to read responses from their lips. The deaf child with this accomplishment goes out into the world's stir and activity and ‘ gets on ’ fairly well ; he follows his calling and enjoys his life far better than if he had never

learned to talk and to read the lips. But, except at home and among friends, he is likely to be at a disadvantage, — at least, he must meet obstacles to a free interchange of thought and feeling with others. How may some of these obstacles be surmounted? Miss Fuller's answer to this question illustrates the principle that controls her methods of instruction. The principle is, that deaf children should be taught and treated, so far as the ends to be reached and the circumstances permit, just as hearing children are taught and treated. Her answer to the question would be: After completing the course of instruction in the Horace Mann School, the pupils should be sent to a school with hearing children. The evidence thus far collected, with regard to pupils who completed the course of study in the Horace Mann School and then entered a school with hearing pupils, shows that the presence and instruction of deaf pupils cause but slight, if any, inconvenience to teachers, and that the deaf reach at least as high a standard of scholarship as hearing pupils. As the good work goes on, we have reason to expect that the deaf, accustomed to meet and cope with the same difficulties as hearing pupils, will, after leaving school, be able to enter upon their work in life with but few of the disadvantages that arise from deafness, and with confidence that they can, for the most part, understand what is said to them, and be understood when they address others."

Additional testimony in this direction is found in the following extract from a letter written last June by Mr. Hager, one of the principals of the Berkeley School. He says: "If it were not for the fact that we have become accustomed to seeing fine work done by the graduates of the Horace Mann School, it would seem to us *impossible* for children so afflicted to enter a class with hearing and speaking companions, and not only hold their own, but fairly lead the way. While I can partially understand how they succeed in your own school, it will never cease to be a mystery to me how they so readily read the lips of teachers who have had absolutely no training in such matters.

"When ——— undertook the study of Latin and French last September, I confess that I anticipated trouble. How was she to get hold of the pronunciation? Well, she has done it! How, I don't know. But one member of her class has a better average, in studies, than ———'s, and that member has no lan-



guage, while ——— does all that he does, and Latin and French in addition.

“I find that, with the single exception of standing or sitting in such a position as to be seen readily by the children, the teacher is not inconvenienced at all.”

Instruction in sewing was given on four afternoons each week to forty-six pupils. Each pupil remained one afternoon to sew for an hour and a half. In some instances pupils were allowed to have more than one lesson. A growing interest was very manifest as the weeks went by, and the pupils took up the parts of the progressive plan arranged for them. Very commendable results were shown by each class at the end of the year.

Instruction in Sloyd was given, as during the previous year, and the cost met by friends of the school. The usefulness of this training has been so clearly shown by the pupils and their work that it is considered advisable to include this school with those for whom provision is made by the city, and thus relieve the kind friends who have hitherto generously supported this department. During the past year twenty-seven boys and twelve girls received instruction. The lessons were two hours in length. Mechanical drawing formed a part of each lesson; no pupil being allowed to begin a model before the drawing of it was completed. The average number of models made by each pupil was six. The finished models show that the pupils are well up to the standard of hearing children in manual skill and exactness.

The teacher of Sloyd, Mr. J. H. Trybom, writes: “The pupils in the Sloyd classes at the Horace Mann School differ considerably in age. There are children between the ages of ten and sixteen years, which usually means six years’ difference in their school attendance. It also means an immense difference in their ability to understand spoken and written language. There is hardly any difficulty in teaching the more advanced classes, as they can well understand whatever is said to them. A careful explanation and practical demonstration is sufficient to make the children understand its purpose and its method of construction.”

Miss Fuller, the principal of the school, believes that during their school days deaf children should be given every possible

opportunity to develop their powers to the fullest extent; and she obtained, through money given by friends, a teacher in type-setting. The lessons were begun in April, and were given to sixteen pupils on four afternoons each week. The results were surprising. At the end of June each pupil could set up ordinary newspaper matter from a page of manuscript, take a proof on the proving-press, and correct typographical errors. The study is of great interest to all, and it is thought that some may find it the beginning of a life work. The useful, self-dependent lives of those who have gone out from this school are abundant proof of the ability of deaf children to profit by instruction.

One of the most interesting hours in the day at the Horace Mann School is that during which the physical exercises of the various classes are practised. Teachers and pupils are enthusiastic students of the Ling system, and the precision and care with which each exercise is taken, fully attest the appreciation the pupils have of orderly, concerted movements.

At the close of the year, in June, a second meeting of the Association to promote the teaching of Speech to the Deaf was held at Lake George, N. Y., and the principal, with seven teachers and a number of pupils, attended the sessions. All took part in the various exercises, and illustrated with pupils in class the methods of instruction employed in the Horace Mann School. One of the prominent features of this meeting was an exhibition of remarkable proficiency in speech-reading by a former pupil of this school.

A conference of the principals of schools for the deaf in America was held at Colorado Springs early in August. This gathering was in some respects one of the most important ever held, because of its direct influence upon the approaching Exposition at Chicago. Miss Fuller was present at this conference, and testified to the value of public day schools for deaf children.

Since our last report, by the death of Mr. and Mrs. Francis Brooks the Horace Mann School has lost two of its most valued and constant friends. Their encouragement and aid helped to establish this school, and their fostering care and many benefactions added to its strength and influence. There are now left but few of those who watched the inception and growth of this



first public day school for deaf children in America. Mr. Brooks was present at the opening of the school, on the morning of the 10th of November, 1869, and on learning that some of the children, gathered from homes of poverty, could not be comfortably clad by their parents, requested Miss Fuller to provide, at his expense, suitable clothing for such, and for any others who might be in similar need. This discretionary power was exercised for two or three years, and many pupils were recipients of Mr. Brooks' bounty. Mr. and Mrs. Brooks remembered the pleasures of the children, as well as things essential to their comfort, and for several years provided Christmas entertainments for them. To Mrs. Brooks' appreciation of the difficulties presented by the English language to a deaf child the school is indebted for money, given at various times, for printing simplified lessons, that lead up to a use of ordinary reading and text-books. She also made many contributions to the pupils' library, and by her sympathetic interest in everything pertaining to the school and its work, brought many helpful friends to it. Through her personal efforts money to provide manual training was raised, and she had the pleasure of knowing that the effect of this training upon the pupils was most beneficial, and that their attainments were equal to those of other public-school children.

One of the happiest results of Mrs. Brooks' active interest in the Horace Mann School was the founding by her of a Home School for very young deaf children. This infant school affords an opportunity for deaf children to learn to speak at an age when others naturally learn to talk, and it is preparatory in its work for the Horace Mann School. It is now in the fifth year of its existence, and parents and friends bear grateful testimony to the value of its teaching.

*Perkins Institution and Massachusetts School for the Blind, M. ANAGNOS,  
Director.*

Since this school was opened, with six children, in the house of Dr. S. G. Howe's father, more than sixty years ago, it has extended the benefits of education, with all its helpful influences, to more than thirteen hundred blind persons. Some of these are no longer living, but hundreds of former pupils are testifying to the value of the education there given, by lives

of honest industry in various walks of life. As with the seeing, so is it with the blind, that not all improve the advantages offered, or attain the highest standard possible to them; but the proportion of those who are honorably successful in various callings, of those who, notwithstanding their deprivation, are not only self-supporting but are supporting families, and of those who have attained high rank as musicians, scholars or in the line of business, has demonstrated the ability of the blind and the importance of schools for their education.

The sixty-first report of this institution covers the year ending Sept. 30, 1892. At this date the number of blind persons connected with the establishment was 210, of whom 193 belong to the school department and 16 to the workshop for adults. The number connected with the school may be classified as follows:—

Pupils belonging to the boys' department, . . . . .	81
Pupils belonging to the girls' department, . . . . .	62
Pupils belonging to the kindergarten, . . . . .	36
Teachers and employees, . . . . .	12
Domestics, . . . . .	3
	<hr/>
	194
Number of Massachusetts beneficiaries, . . . . .	99
Number of adults belonging to Massachusetts, . . . . .	24
Number of blind persons belonging to other states, . . . . .	87
	<hr/>
	210

The course of study embraces kindergarten, primary, grammar and high-school training, all of which is conducted on the same principles as in the corresponding grades for the seeing, except in so far as it is needful to supply tangible methods in place of those which appeal to the eye. A well-equipped gymnasium furnishes means of physical training, which is even more essential for the blind than for the seeing, because their limitation is a hindrance to that full freedom of locomotion which is so great an aid in perfecting physical growth and development.

Music, not only as an art which is completely within the range of attainment and enjoyment by the blind, but as a means of future usefulness, necessarily takes a prominent

place in their education; and instruction on the organ, piano, violin, brass instruments, and vocal culture, is given by a corps of efficient teachers. The department of pianoforte tuning prepares, for an occupation especially suitable, blind young men who have the requisite natural ability.

Sloyd teaching has already become an important feature of the educational work of this school. It is taught to both boys and girls, and its value is increased by the genuine pleasure which it affords to nearly all who are receiving lessons.

The printing office of this institution is of great importance, not only to the blind of New England, but even throughout the United States, since there is but one other printing house in the country — the American Printing House for the Blind, in Louisville, Ky. — which issues any considerable amount of embossed literature. From its own publications, with some additions from the American Printing House and other sources, it has accumulated a large library, which is of inestimable value to the school and also serves as a lending library to the blind of New England. But embossed books are very bulky, and the library had so far outgrown its accommodations that many of its books were useless because stored in inaccessible places. The completion of a new library became, on this account, the most important event of the past year. A new building, two hundred and thirty-eight feet in length on Fourth Street, and ninety feet on H Street, with an average width of twenty-six feet, affords, in one story, three spacious halls for a library of embossed volumes and books in ink print, as well as cases and drawers for stuffed birds and animals, and specimens of all kinds, valuable in object teaching. The story above the library is used entirely for the music department of the boys' school.

The progress of Edith M. Thomas, Willie E. Robin and Tommy Stringer, the three blind and deaf children now under instruction, has been highly satisfactory, and they are pursuing their studies and occupations in classes with other children. Concerning the education of blind deaf mutes the sixty-first report speaks as follows: —

“Experience and thoughtful consideration deepen the conviction that such children should not be taught apart from others, and subjected to interruptions which the visits and special attentions of friends and an interested public inevitably

produce ; but that they should be placed in the regular classes, and their education conform in all respects with that of other pupils of the school. Special teachers will still be needful, but their office will become mainly that of interpreter to convey to the minds of the deaf blind the instruction which their classmates are receiving through the ear.

“ Persons suffering from this triple deprivation have been so few and so widely separated that no provision exists for their education, which, indeed, was considered impossible until Dr. Howe’s success with Laura Bridgman demonstrated its practicability. With the increase of population the number of such cases has become considerable, and now the repeated appeals for help for these deeply afflicted ones makes it a duty to consider the establishment of a department for the education of blind deaf mutes.”

*The Massachusetts School for the Feeble-Minded, Waltham, WALTER E. FERNALD, M.D., Superintendent.*

Number of Massachusetts beneficiaries during school year 1891-92,	142
Number admitted during the year, . . . . .	44
Number in school Oct. 1, 1892, . . . . .	174

The cases admitted during the year represent almost every phase and degree of congenital mental defect, from the simply backward boy or girl needing special school training to the helpless being unable to move or to speak, who must be fed and nursed like an infant. The admissions have included an unusually large proportion of boys and girls of the school grade, capable of receiving much benefit from our instruction. There were 11 older boys, past the school age but of fair intelligence, who ought to be developed into useful men. There were 16 females over fourteen years of age, many of whom are capable of much industrial training.

Of the discharged, 22 were kept at home by the parents or friends, 5 were removed by order of the overseers of the poor, 2 had become trained sufficiently to enter the public schools, 4 were kept at home to work, 3 were insane, 2 had no settlement in this State and 1 was transferred to the school for the deaf at Northampton.

The plan of detached and separate departments greatly facilitates the proper classification of the inmates, and helps to



secure to each inmate the consideration of individual wants and needs so hard to get in a large institution where the inmates are massed in one huge building. The inmates are classified as follows: At the girls' dormitory are all the girls of the school grade; at the boys' dormitory are the boys in the school department, and the better class of custodial boys; at the farm-house are the large boys or men who are employed on the farm and with the outside work; at the asylum are the younger custodial boys, the custodial females of all ages and the working force of grown women. Each of these departments has a competent matron, who lives in the building and devotes her entire time and attention to the supervision of the personal care of the children in that department. In nearly all of the classes in physical training the Ling or Swedish plan of educational gymnastics has been adopted. This system, as modified, means the prompt execution of precise and carefully planned movements of the various groups of muscles at the command of the instructor. The pupil must be closely attentive, he must quickly hear and understand, and he must promptly execute the command. It is a mental as well as a physical drill.

The varied routine work of a large institution affords a variety of occupations where the inmates can be employed with great benefit to themselves and to the advantage of the institution. This practical industrial training is a very important part of the education of our pupils. They are much happier and better off in every respect when they know they are doing some useful work.

Certain daily duties are assigned to each boy and girl, and these duties are often changed, to make them familiar with different kinds of work. The boys take great interest in the farm and garden work. This year they have picked hundreds of loads of stone from the fields and carted them off for use in roadmaking. They do all the harrowing and cultivating. One of them has, day after day, driven a pair of horses and held the plough at the same time. They did all of the weeding and nearly all of the hoeing in the large garden. The truck team, collecting and delivering supplies between the different buildings, takes the entire time of two boys. Other boys assist the baker, carpenter and engineer. One boy devotes all his time .

to painting, doing as good work as we could hire done. Two boys, proudly uniformed with red caps, serve as errand boys. The shoes of four hundred inmates are kept in repair entirely by the work of the boys. They do all of the printing of stationery, blanks, circulars, etc., for the school. The boys also do much of the housework in the buildings where they live. The girls are kept just as busy. In the laundry they learn to wash, iron and fold clothes. They do much of the sewing, mending and darning for a large household. Much of the children's clothing is made in the sewing-rooms by the girls. Relays of willing helpers keep eight sewing machines busy from morning until night. Every girl at all bright is expected to keep her own clothing in repair. They are taught to wash dishes, make beds, wash windows, polish floors, sweep, dust, etc. The older girls and women are of great assistance in the care of the feeble and helpless children. The instinctive feminine love for children is relatively quite as marked with them as with normal women. A newly admitted child is at once eagerly adopted by some one. This responsibility wonderfully helps in keeping this uneasy class happy and contented. Without this cheerfully given service the institution could not well care for the large number of helpless and feeble children in the asylum department without a largely increased number of paid attendants.

As a class, the feeble-minded have dull perceptions, feeble power of attention, weak will power, uncertain memory and defective judgment. It is useless to attempt to arouse these dormant faculties by forcing upon them the abstract truths of ready-made knowledge. The teaching must be direct, simple and practical. The child must be made to do, to see, to touch, to observe, to remember and to think. The varied and attractive occupations and busy work, which are so important a part of the modern graphic methods of instruction for normal children, are utilized to the fullest extent. Object teaching, in the broadest sense, is a prominent feature. The school now has a good collection of objects, models, charts and other apparatus for the practical illustration and application of the subjects taught in the schools. There is for the use of the teachers a school library containing nearly two hundred recent and standard works on kindergarten and primary work, object



teaching, physical and manual training, and other subjects directly connected with the school work.

At the beginning of this year the manual training department was thoroughly reorganized. The training room was equipped with a first-class outfit of tools and benches. Three of the teachers prepared themselves for this work by attending a normal course at the North Bennet Street Industrial School. The boys were graded into small classes, and these classes have received systematic, progressive training throughout the year. The teachers and pupils have maintained their interest and enthusiasm, and the results have exceeded all anticipations. The boy who begins to construct things is at once compelled to think, deliberate, reason and conclude. He becomes familiar with the properties of wood, leather, metals, etc. He acquires definite, accurate control of his muscles. The institution does not attempt or expect to make skilled artisans of its pupils. The value of the finished work is a secondary consideration. The mental discipline secured by the *accurate doing* is the result desired.

The peculiar adaptability of this system of manual training to the education of the feeble-minded will be at once recognized. The name implies the mere training of the hand, but every movement of the hand results from, or is accompanied by, a movement of the mind. Yet the mind is not at any time taxed beyond the easy comprehension of the child. He is not at the beginning mystified or overcome with a shadowy idea of construction. He learns to saw straight. He comes to know when he saws straight. He knows when he saws crooked. He knows the difference between the two. He learns to plane a surface to a level. He comes to know when the surface is level. As he saws straight and planes straight his muscles become more and more accurate in their movements. If he has no organic defects, he gets to see straight, to walk straight. It may take a long time before he can saw straight and plane to a level. He is given a chisel. With it he cuts to lines. Then he himself draws the lines. He makes measurements. By gradual steps he makes a mortise, without the faintest idea of anything to be done with it. At length he fits two pieces of wood together; and he does not do this without having a pretty fair understanding why they fit, or at least a pretty accurate

comprehension of what he must do to make two pieces of wood fit together well. The poor fellow's brain has kept company with his hands.

The parents of quite a number of the children have often expressed a wish that it was possible, by payment of a fixed sum, to make provision for the life care of their feeble-minded children. Even with people moderately well off, the uncertainty of financial investments and the fear that funds left for this purpose may be otherwise diverted, cause much anxiety as to the fate of the child after the death of the parents. Some such provision would afford great comfort to the parents, and would increase the permanent funds of the school. It would also give charitably disposed persons an opportunity to endow life memberships.

#### EXPENDITURES FOR SPECIAL INSTITUTIONS.

##### AMOUNT EXPENDED FOR THE INSTRUCTION OF THE DEAF DURING THE YEAR.

###### *Paid American Asylum.*

65 pupils, quarter commencing March 1, 1892, . . . . .	\$2,875 00	
63 pupils, quarter commencing June 1, 1892, . . . . .	2,787 50	
63 pupils, quarter commencing Sept. 1, 1892, . . . . .	2,787 50	
64 pupils, quarter commencing Dec. 1, 1892, . . . . .	2,831 25	
Clothing provided beneficiaries for the year ending July 1, 1892, . . . . .	361 72	
	<hr/>	\$11,642 97
Kindergarten for Blind, support of Edith M. Thomas, deaf, dumb and blind, to Oct. 1, 1892, . . . . .	300 00	
	<hr/>	
Aggregate amount expended during the year, . . . . .		\$39,506 19

###### *Paid Clarke Institution.*

88 pupils, quarter commencing Jan. 1, 1892, . . . . .	\$3 850 00	
89 pupils, quarter commencing April 1, 1892, . . . . .	3,926 88	
89 pupils, quarter commencing July 1, 1892, . . . . .	3,893 75	
98 pupils, quarter commencing Oct. 1, 1892, . . . . .	4,269 18	
	<hr/>	\$15,939 81

###### *Paid Horace Mann School.*

85 pupils, February 1 to July 1, 1892, . . . . .	\$14,484 11	
Transportation, September 15 to Dec. 15, 1891, . . . . .	474 58	
Transportation, Dec. 15, 1891, to March 15, 1892, . . . . .	456 98	
Transportation, March 15 to June 15, 1891, . . . . .	537 91	
94 pupils, Sept. 1, 1892, to Feb. 1, 1893, . . . . .	5,059 93	
Transportation, June 15 to Nov. 15, 1892, . . . . .	497 85	
Board and care of pupils, . . . . .	112 00	
	<hr/>	\$11,623 36

AMOUNT EXPENDED FOR THE INSTRUCTION OF THE BLIND DURING THE  
YEAR AT PERKINS INSTITUTION.

The following summary of the treasurer's account shows the financial condition of the institution :—

<i>Receipts.</i>	
Cash in treasury Oct. 1, 1891, . . . . .	\$6,016 37
Annual appropriation from State of Massachusetts, . . . . .	30,000 00
From State of Massachusetts for board of Edith M. Thomas, . . . . .	300 00
Income from all other sources, . . . . .	108,389 62
Legacies and donations, . . . . .	2,693 00
Legacies, donations and contributions to the kin- dergarten, . . . . .	38,124 07
Donations for the new kindergarten building, . . . . .	19,324 82
	<hr/> \$204,847 88
<i>Disbursements.</i>	
Maintenance, superintendence, and instruction, . . . . .	\$65,162 43
New library building and furnishing, . . . . .	31,391 71
New kindergarten building, . . . . .	19,763 38
All other expenses, . . . . .	25,336 44
Investments, . . . . .	50,000 00
Cash balance Oct. 1, 1892, . . . . .	13,193 92
	<hr/> \$204,847 88

AMOUNT OF EXPENDITURES FOR THE CUSTODY AND INSTRUCTION OF  
THE FEEBLE-MINDED.

The treasurer's annual report for 1892 shows the financial condition of the school to be as follows :—

<i>Receipts.</i>	
Balance last account, . . . . .	\$841 48
Annual State appropriation, . . . . .	25,000 00
State, new buildings and furnishings, . . . . .	8,583 67
Board of State inmates, . . . . .	5,117 85
Collections, . . . . .	36,665 50
Income of funds, . . . . .	3,006 38
Change of investment, . . . . .	4,425 14
Loan, . . . . .	22,800 00
Amount due treasurer, . . . . .	239 62
	<hr/> \$106,679 64
<i>Expenditures.</i>	
Extraordinary expenses, . . . . .	\$17,072 69
Current expenses, . . . . .	61,891 48
Furniture of new buildings, . . . . .	7,773 16
New buildings, . . . . .	13,134 26
Board of State inmates, . . . . .	5,117 85
Interest on borrowed money, . . . . .	1,690 20
	<hr/> \$106,679 64

## INCOME OF MASSACHUSETTS SCHOOL FUND, 1892.

Cash on hand Jan. 1, 1892, . . . . .	\$63,842 94	
Income for 1892, . . . . .	167,229 65	
	<hr/>	
	\$231,072 59	
Paid cities and towns in 1892, . . . . .	\$64,750 45	
Paid accrued interest on securities purchased, . . . . .	2,667 60	
Paid educational expenses, 1892, . . . . .	81,827 27	
	<hr/>	\$149,245 32
Cash on hand Dec. 31, 1892, . . . . .	\$81,827 27	
From which there is to be paid to cities and towns in 1893, . . . . .	81,827 27	
The Massachusetts school fund amounted, Dec. 31, 1892, to, . . . . .	\$3,665,761 88	

## THE PUBLIC SCHOOLS.

An intelligent discussion of the character and value of our system of public schools requires: first, a knowledge of what constitutes the system itself; second, a knowledge of the ends which a system of public schools should be adapted to promote; and third, a knowledge of the relations which the work of our schools, as they now exist, bears to the accomplishment of these ends.

The discussions to which our attention has been lately directed relate almost exclusively to the branches of learning to be introduced into the public schools that their graduates may leave them skilled in the occupations of practical life, or prepared to pass the verbal examinations required for entrance into the higher institutions of learning.

That such a treatment of the subject relating to the true province and actual work of the public schools is inadequate, and may be even mischievous, will appear when we perceive that it takes little or no notice of the effect that should be produced on the mind of the learner by the pursuit of a course of studies, nor of the relations that one branch of knowledge bears to another, nor of the method the mind should be trained to use in all its investigations for the discovery of the truth and in all its activity for the development of its power.

If we turn our attention to our school system, as such, we shall find in it the kindergarten, the primary, the grammar and the high schools. These schools hold a logical relation to one another, in the kinds of knowledge pursued in each, in the different modes of mental activity required in the pursuit of the kinds of knowledge, and in the different phases of mental development which the activity is adapted to produce.

The kindergarten has been lately introduced into our system of public schools, and is the most elementary in its character of the different grades in the system. Kindergarten exercises, rightly conducted, direct the spontaneous activity of the child to forming good mental and moral habits, and to making himself familiar with those simple ideas that form the elements of all our thought and all our knowledge.

The primary school leads the child to the study of those natural objects and natural phenomena that can be presented



as individual wholes, directly and at once to the mind through the senses. It instructs him in the forms of expression best adapted to describe his ideas of those things which are presented to his mind. The mental activity occasioned by the primary course of studies should be adapted to produce a development of the observing powers, the imagination, the judgment, and that faculty of the mind which is employed in associating its ideas with their proper signs and called language.

The grammar school course of studies should be a development of the primary course. It should contain a collection and arrangement of topics best adapted to occasion the exercise of the mind in observing that of external objects which can be presented to it through the senses; in representing past mental states by acts of the memory and imagination; in that form of generalizing which is limited to collecting into groups the individuals that have been observed to have common qualities; and in that form of reasoning which consists in inferring what is true of one thing from a knowledge of its relations to another. This form of generalization and of reasoning is elementary in its character, and differs from the scientific acts called by the same name, as a knowledge of individuals differs from a knowledge of classes, or as the act of inferring the existence of one fact from the observed existence of another differs from the act of analyzing a general abstract truth to find the particular truths which it contains. The language of the grammar school should be a development of that used in the primary grade. The simple affirmation of names of things should be enlarged into descriptions of them. The attention of the learner should now be directed to the forms of words by which they are constructed into sentences, and to the use of sentences as expressions of knowledge.

At this point the scholar should be prepared to enter the secondary or high school of the system; and he will be prepared, if the elementary schools through which he is now supposed to have passed have trained his mind in forming simple ideas, in becoming familiar with objects of thought that may be presented to the senses, in arranging in groups those things observed to have common qualities, in deriving a knowledge of new facts by an analysis of facts already known, and lastly



in the use of those forms of speech that good usage has appropriated to the ideas to be expressed by them.

The elementary training, to which reference has now been made, includes a facility in the use of the analytic objective method of study, and the possession of knowledge enough to enable the pupil to derive information from books of those things that lie beyond the reach of the powers of observation. This training also includes that cultivation of the emotional nature and the will which is the natural result of right thinking of appropriate objects of thought.

The secondary or high school stands at the head of our system of public schools. It has for its special work to lead the student from the study of individuals for a knowledge of facts to the study of classes for that which is true of all objects of a kind. The course of study adapted to this grade of school exercises must be a development of the elementary courses. Scientific knowledge derives all its materials from elementary knowledge, and therefore cannot exist without it. As the learner passes from elementary to scientific study, the language he employs is no longer confined to the use of simple names by which individual objects are denoted, nor to simple sentences by which the parts and qualities and uses of objects are described. The language peculiar to the secondary school is that which defines causes and classes, and describes them by means of general abstract propositions. The mental activity occasioned by the use of general abstract terms and logical definitions is adapted to produce a development of the powers that generalize and reason.

As our system of public schools makes complete provision for the pursuit of the two forms of knowledge, elementary and scientific,—for the cultivation of language by which individual facts and general truth may be described, and for training the mind to observe and to reason in the way best adapted to the formation of good habits, the system is perfect, and as a system will not be made the subject of adverse criticism by those who have an intelligent idea of its nature. Every well-informed educator judges of a system of schools by his knowledge of the relations which its different grades of instruction bear to the right training of the mind. All other standards of measurement are misleading and arbitrary. Although our school

system may be perfect in its provisions for a complete public school education, there may yet be important defects in our system of instruction.

A system of instruction may be composed of three elements. These are to be found, first, in the collection of topics introduced into the courses of studies; second, in the arrangement of the topics with reference to their logical relations; and third, in the methods of teaching and study provided.

The branches of learning to be taught in our public schools are enumerated in the Public Statutes, and are therefore fixed by law. An analysis of the list will show that it is complete enough, with the development of which it is capable, to bring before the learner's mind all the subjects and objects of study that can with propriety or profit be presented in the public schools. The list is complete enough to supply occasions for all forms of activity which the mind is capable of producing, and therefore for all the discipline the mind is capable of receiving through school studies. The new branches that some would add to the list are not new, but will be found on examination to be included, in so far as kinds of knowledge are concerned, in the branches already introduced.

As right mental development is generally admitted to be the supreme end which school exercises should be adapted to secure, all changes made in courses of study by addition or subtraction should have special reference to this end. There are some, however, who would modify the work of the public schools with special reference to a future business life, or with reference to the requirements for admission into the superior schools. It should not be forgotten that ninety-three per cent. of our school population never go in their school life beyond the grammar school, and that probably ninety-seven per cent. never go beyond the high school; so that no change can be approved in the selection of topics of study for the public schools that is not made for the good of the schools considered to be ends in themselves. Any other change than that would be likely to defeat the purposes for which the public common schools were established. If the graduate of the public school has faithfully and successfully completed the course of studies and exercises established by the State, then he will have the knowledge and the mental discipline requisite to enable him to

enter upon any of the occupations of practical life with intelligence and facility ; or, if he should choose to go on to a more complete attainment of a disciplinary education, he will have the preparation requisite to entitle him to enter, without further conditions, the higher institutions of learning for that purpose. If this cannot be, then the State should provide, as some are now suggesting, all institutions necessary for the complete disciplinary education of the people. If this can be, then harmony will be restored at once between the public schools and the educational institutions above them, provided the higher institutions are conducted in a way adapted to take the scholar steadily and progressively on beyond elementary and secondary instruction to higher forms of mental activity and knowledge. This may require important changes in the present methods and spirit of instruction in the superior schools.

From what has been said it appears that our public schools are not specially subject to criticism on account of the collection of subjects that have been introduced into their courses of study.

The second element of instruction directs our attention to the arrangement of the various subjects to be taught, with reference to their logical relations. In this the work of the schools in many instances is done in violation of the laws of the mind, and without regard to the relations which one kind of knowledge bears to another. This may be observed in schools that teach their pupils the letters of the alphabet before words, and words before ideas which the words represent ; that teach the parts of objects and subjects before presenting things with their parts related to one another ; that attempt to teach scientific knowledge before the mind of the learner is made familiar with the facts of science ; and that direct their attention to the cultivation of the emotional nature and the will before the reasons for feeling and willing have been made objects of consciousness. This logical defect in our forms of instruction is to be removed only by a philosophical arrangement of courses of study by school authorities, and a clear understanding of the laws of thought by the teacher. Earnest attention is now turned towards a modification of courses of study with reference to logical order.

The third element of instruction relates to the method of teaching employed. Method, in its unlimited sense, means a process of thinking governed by rules. There are two processes of thinking that may be attempted, therefore there may be two methods. The one proceeds from the whole to the parts in its first act,—called analysis; it then proceeds from the parts back to the whole in its second act,—called synthesis. The two acts constitute one process, called, if analysis is first in order, the analytic process; if synthesis is first, the synthetic process. The two methods of thinking are the analytic and synthetic methods. If restricted to teaching, method is the process of presenting objects and subjects to the learner's mind. The teaching process should be governed by the same rules as the thinking process. There are two methods of teaching, and the one to be chosen for application in the public schools will be determined by the nature of the ends which these schools are intended to promote. The subordinate ends are knowledge and information; the ultimate end is the full and harmonious development of the mind.

Knowledge is the result of thinking directly of things just as they exist. All objects and subjects of knowledge exist as units, with their parts and qualities related to one another. Information is a state of the mind occasioned by some form of description of things that may lie beyond the reach of observation. Information depends on knowledge, and can never go beyond it; that is, we must first know of things in their kind, that we may be informed when and where such things are to be found. Development is the facility which the mind may acquire in the exercise of its power.

There are laws of the mind that control it in the acquisition of knowledge, and information and development. One of these laws requires that the object of knowledge, of whatever kind it may be, shall be brought into the presence of the mind as a condition of its knowing. Upon this law depends the objective method of teaching.

Another mental law controlling the acquisition of knowledge requires the whole of a thing, either object or subject, to be presented before it is possible to know the parts, as parts, or to know their relations to one another. Upon this law depends the analytic phase of the method of teaching.



A third law requires that elementary knowledge or a knowledge of facts shall be taught before it is possible to teach or to acquire a knowledge of classes and of causes, or scientific knowledge. Upon this law depends the order of teaching.

There is a fourth law which requires the mind to exercise its power, that it may acquire more power. Upon this law depends the relation which self-activity bears to development.

These laws constitute the principles of teaching and of study, and the method founded upon them directs the teacher and the pupil in obeying them. It seems to follow that a right arrangement of the different branches of learning in the various courses of instruction, and the use of the right method of teaching and study, are of vital importance. These things are obscured and are deprived of their importance in the minds of many through the influence of conflicting opinions. Some say that method is a mechanical formality, and the less we have of it the better. Others say that one method is good for some teachers and some subjects, and another method is good for other teachers and other subjects. Still others deny the existence of method founded on fixed principles having universal application in thinking and in teaching others to think. Method in such minds must mean the same as device or manner. If they should happen to come to a full understanding of the nature and value of a philosophical method in the pursuit of truth and mental development, they would not be likely to condemn it or treat it with indifference.

These sentiments with reference to method in school work are not entertained to any appreciable extent by public school men. Those who are actually at work as teachers or as superintendents of schools make use of experience as well as theory in forming their judgments.

Opposition to the application of philosophy in teaching often appears in the writings of those who are not intimately related to the work of the schools, and who seem to forget that there are laws of the mind which control and limit it in every exertion of its power.

If we may safely conclude that our system of schools is rightly constructed, and that our system of instruction need not be disturbed in its list of topics, then we may turn our attention to the arrangement and development of the topics

taught, and to the method by which they should be presented for study. These things require some radical changes. The branches of instruction must not be specialized or developed so as to multiply topics of study to the confusion of knowledge and the distraction of the learner's mind. The studies must be arranged in accordance with their logical relations, and taught by a method that is in harmony with the conditions of knowledge and the acquisition of mental strength.

There are some fallacies entertained by those who give advice concerning the organization of the schools, and who criticise their ways and their results. Some say that to train children in classes, pursuing the same course of studies, taught by the same teacher, using the same method of teaching, will produce a dead uniformity of results. There doubtless would be more harmony and stability in human affairs if individuals could by the processes of education be brought closer together in their ideas of what is best in thought and in action. This is one of the ends for which the public schools were established. The State depends on the common education of the people as the only cause of that unity of ideas necessary to its continued existence. To produce such an education requires public schools in which the children are organized into a community of persons required to labor together for some common end. In no other way can the young be trained into that social state which prepares them to become a people, controlled in their civil relations by self-imposed rules. But the uniformity implied in all this is that which is found in a common assent to the truth and to the fundamental principles that are the only guides to a successful private or social life, and not that which is opposed to individuality. The impossibility of destroying the individuality of a person by class exercises in school will be seen when we remember that it is the activity itself of the mind that determines character, and not the presence of external things. Things may be the occasions of the activity, but the activity will derive its form and degree from the nature of the mind that acts. As every individual mind differs from every other mind, so will their activities and their resultant characters differ.

The facts are that class work in the schools does not produce mental uniformity. It rather stimulates by competition



each member of the class to exhibit his own strength in excelling in qualities and actions. No one finds it necessary to complain of too much uniformity in the schools, when the products come to take their places as citizens in communities where they are to live and think and act.

Again, it is said that the schools as now conducted produce stupidity in the minds of the school population. Stupidity is an original gift, and is not the product of mental training of any sort. Therefore it is not a crime, and from the nature of the case cannot be entirely removed by the processes of education. The character of a school cannot be determined by simply looking at it, and then going directly away to estimate its value from what may have been observed. The schools are to be judged by their products, and we shall never obtain any intelligent account of them from men who go about the country making an examination merely of that which presents itself to their eyes.

The judgments passed upon the schools are not infrequently formed in violation of the objective method in collecting facts and of the scientific method in deriving general conclusions. It requires knowledge, experience and good-will towards the schools to treat them with intelligence and justice. If these elements appear in the treatment, it should be received as a favor and used as an important means of improvement.

An analysis of our school affairs as they now exist will give us courage to think and to work for their continued success.

Massachusetts has a public school system. The system is constructed in accordance with the natural evolution of knowledge, mental activity and mental development. In this is found its perfection. The schools of the system have courses of studies containing a list of topics that with proper development are adapted to the different grades of instruction for which our school system makes provision. These topics are taught by earnest and faithful teachers, nearly one-half of whose number has had a professional training. The teachers and superintendents of the schools are everywhere turning their thoughts to removing the imperfections in the order of studies as now arranged in the schools, and to reforming the wrong methods of teaching now too frequently employed.

The interest of the people in their public schools and in

popular education is shown by the attendance of the children of school age upon them, and by the amount of money voluntarily raised for their support. "The returns show that the increase in the enrolment of children between the ages of eight and fourteen in 1890 over that of 1880 is 24.6 per cent., a ratio less than 1 per cent. below the increase of the whole population, and 4.2 per cent. higher than the increase in the number of children in the State between five and fifteen years of age. This takes no notice of those attending private schools." Thus it appears that the increase in school attendance in the Commonwealth is not behind the increase in population, while it is far in advance of that required by our compulsory laws.

Last year the people expended over \$9,000,000 for the public education of their children, — a sum equal to over four mills on every dollar of our taxable property, and amounting to more than \$24 for every child of school age. This large sum was the voluntary contribution by the people, for the State requires them to raise no more than one-eighth of that amount. These things show that the schools are in good repute with those who patronize and support them.

There has never been a time since the State was established when the advantages of popular education were more intelligently understood or more universally accepted. Never before were the relations that the public schools bear to the existence and cultivation of the democratic spirit more fully appreciated, and never were the people more thoroughly awake to the necessity of guarding these institutions against all unfriendly criticisms from educational adventurers, and against the introduction of any elements into their administration which will confuse their legitimate work and destroy their character as schools of the people.

The public schools are not perfect, and they never will be perfect. The causes that produce them and the means employed are too complex and too independent of control to bring them fully under the guiding influences of either philosophy or authority. The schools with us are in the hands of the people, and they can never rise much above that which the people demand. With all their weakness, their strength is greater than their weakness. This may be seen in the excel-

lent system into which they are organized, in the rational courses of instruction with which they are provided, in the skill, intelligence and faithfulness of their teachers, and in the important results which they have produced.

Let the schools be judged by their results, — results may be appreciated by all. If we turn our attention to results, we shall find that the public schools of the Commonwealth, with all their imperfections, have produced a people nowhere excelled in that intellectual and moral development which best prepares them for self-government and for the highest forms of human civilization.

### COURSE OF ELEMENTARY STUDIES.

The following course of studies has been prepared for the elementary schools of the Commonwealth, with the hope that it may serve as a guide to such courses as the public school authorities may think best to use in the schools under their supervision.

A well-selected and arranged list of studies for the public schools is important, as it will direct the pupil to the objects and subjects of knowledge that are to be brought before his mind, and so to the kind of mental activity he should be led to exert. It should be borne in mind, in preparing a course of school studies, or in criticising courses already made, that the primary or first course should present occasions for obtaining the most general and the simplest knowledge that can be produced by study. Making use of the simple ideas with which the pupil has been made familiar in the kindergarten, he will on entering the primary school commence the study of those things that can be observed, and of language by which primary ideas and thoughts may be properly expressed.

The pursuit of this course of studies will produce a knowledge of facts, train the acquisitive powers and memory, and furnish materials for the activity of the imagination. These forms of mental activity will occasion emotions and, in connection with school government, the cultivation of the will.

The grammar course should be a development of the primary course, presenting the same objects of thought, taken up in the same order. This course should lead the mind of the pupil beyond the mere fact known by direct observation, to

inferences from these facts concerning their uses and their relations to man. The study of uses and relations should prepare the mind for a knowledge of the forces which produce the phenomena that have been observed.

The facility acquired in the primary school in combining numbers should prepare the mind for its application to the solution of mathematical problems. The language of this period should be a development from the simple affirmation of names into a description of individual objects that have been observed.

A thorough course in the kindergarten, and of eight or nine years in the elementary schools of the primary and grammar grades, should prepare the pupil to pass into the secondary schools of our system, in which his knowledge of facts relating to individuals will become a knowledge of classes and causes, and his language of names and descriptions will be developed into general abstract propositions.

From the kindergarten to the secondary school there should be a progressive development in the knowledge acquired, in the activity exerted and in the mental discipline produced.

## COURSE OF STUDIES FOR ELEMENTARY SCHOOLS.

A course of studies adapted to the requirements of the public schools, will determine the kind and extent of the knowledge which the pupils of these schools will have the opportunity to obtain in their school exercises. The arrangement of the various topics of the course will determine the order of study and the relations which the different kinds of knowledge obtained will bear to one another in the learner's mind.

The development of power and of good mental habits in the minds of the young will depend on the kind and degree of mental activity they are required by their studies to exert in the pursuit and application of useful knowledge. Useful knowledge and right mental habits are important ends to be secured in the public school. If, therefore, the topics enumerated in a course of studies are selected and arranged with an intelligent reference to the accomplishment of these ends, they must form a plan of school work which should be made universal in its application.

An ideal course may require some modifications, that it may be adapted to the schools of the various localities in the State. But these modifications will not be likely to make changes in the principles upon which the model course is founded. Such a course will, therefore, aid school authorities in making a plan of studies for the schools under their own supervision, even if some modifications are made. The model course will also suggest the advantages to be derived from constructing the work of the school with reference to the ends to be secured. With such considerations in mind, we may hope that much of the waste now experienced through the use of aimless courses of study will be prevented.

The Massachusetts system of public schools consists of four grades of schools, known as primary, intermediate, grammar



and high schools. These grades are distinguished from one another by the topics introduced into their courses of studies, and by the kind of mental activity required in pursuing them. The schools of the system are said to be graded when each of the four grades has its own separate organization of classes, composed of pupils of the same attainments, pursuing the same branches of learning. The schools are ungraded if the different grades are organized into one school, in which the pupils are taught in various classes, according to their attainments in the different subjects of study. From this we may infer that each of the two kinds of schools must have an organization of its own. While the same method of teaching should be practised in the graded as in the ungraded schools, the arrangement of their courses of studies must differ in some particulars, to meet the wants of the different classes. The following course of studies has been prepared for elementary schools, with the hope that at least it may aid the school authorities of the towns in preparing courses adapted to their own schools.

#### ORGANIZATION OF UNGRADED SCHOOLS.

The pupils should be arranged in classes, with special reference to their attainments and to their ability to pursue the topics of study assigned to the classes in which they are enrolled. Such an arrangement will produce a grading of even the ungraded schools. The large number of classes frequently organized in ungraded schools, to be taught by one teacher, is always a hindrance to good results. Such an arrangement allows but little time to be given either to teaching or to recitation.

Class exercises are important. They provide an opportunity for the young pupils to express by language or by illustration what they know of the subjects of their lessons, and what they do not know. They furnish a good occasion for criticisms, and for directing the young scholars to new truths relating to the subjects of their lessons. The recitation exercises offer an important stimulus for study, and a time for teaching an advance lesson. There is not now much teaching in the schools. Too often the children are hurried through their recitations, and then, without being directed by good teaching to the knowledge they are thereafter to seek in an advance lesson, they are sent



away to commit to memory the words found in their books. It is most important, therefore, that committees, superintendents and teachers turn their attention to limiting the number of classes, especially in their ungraded schools, so as to make good teaching possible. For accomplishing this end the following suggestions may be of service:—

1. Unite as far as practicable the classes pursuing the same subject. By the use of supplementary reading matter, and by the use of the topical method of instruction in other branches of learning, classes in different grades may be brought together.

2. By alternating the recitations of the older pupils in certain subjects. The recitations in geography may alternate with those in history, physiology with grammar, and writing with drawing. The reading exercises of the upper classes may alternate with one another.

3. There may be a frequent substitution of written for oral recitations in many subjects. The written work may be examined out of school hours. Written exercises may be so conducted as to produce a most thorough test of the learner's knowledge, and of his ability to make a correct expression of what he has learned.

A programme of exercises should be prepared at the beginning of the term. It should contain the order of exercises for each day, indicating the time at which each exercise should begin and end. The programme should be carefully followed by the teacher, that he may train his pupils to habits of promptness and punctuality.

#### MEANS OF TEACHING.

*Black-boards.*—There should be an abundance of black-board surface on the walls of every school-room. A movable black-board will be convenient, if not necessary, for the teacher to use in teaching his topics to the various classes. In connection with the black-boards there should be a good supply of crayons, erasers and pointers.

*For Reading.*—A chart of sentences for beginners, a graded set of readers to be used as the different classes are prepared for them, a few copies of supplementary books for information, a large English dictionary, a biographical dictionary and a gazetteer.

*For Writing.* — Slates ruled on one side for the youngest pupils; paper, pencils, pens and ink, pen-wiper and blotter for older pupils; practice paper, means of sharpening pencils.

*For Arithmetic.* — A kindergarten table for primary pupils; blocks, splints, numeral frame, for teaching the numbers; foot rules, yard-stick; measures of capacity, liquid and dry; toy money.

*For Geography.* — A globe; outline maps of the hemispheres and of the continents, a map of the United States and a map of Massachusetts; reference books; paper for map drawing; pictures of persons, places and events; gazetteer; a board or table for moulding sand (table painted blue).

*For Physiology.* — Various parts of the body preserved for illustration; anatomical and physiological charts.

*For Drawing.* — Clay for modelling, geometrical forms, models and casts in plaster, pencils, rulers, manilla and white paper, compasses.

*For Nature Studies.* — Direct the pupils and encourage them in making collections of natural objects for observation. In elementary physics, chemistry and astronomy, instruct the pupils in making simple illustrative apparatus.

*Closet and cases for text-books, supplies and apparatus.* — The condition of these things should be frequently inspected by the school committee or superintendent.

Every elementary school should be supplied with the most approved means of teaching the facts relating to all objects and subjects to which the course of required studies directs attention.

As ninety-three per cent. of the pupils in our public schools never go beyond the grammar schools, and no more than one per cent. go beyond the high schools, it is plainly necessary to construct our public school courses of studies with special reference to ends found in the public schools themselves. At the same time, the best preparation for taking up higher forms of study is made by pursuing the best course for elementary learning. If this is not true, the higher course must be artificial and false.

We do not necessarily enrich a course of studies by adding new subjects to the list. The addition may distract the learner's mind by bringing into its presence a mass of unrelated things

as occasions of knowledge. Such a result is what educational reforms are sure to accomplish, when founded on mechanical principles of action. The enriching we need is in an improved method of teaching. If the analytic objective method of teaching is continued throughout all grades of instruction, then the student from the preparatory school can go on in progressive steps from elementary to scientific study without ever being compelled to violate the laws of the mind that control it in the acquisition of knowledge and of mental development.

#### LANGUAGE.

Language, as used in the schools, consists of words employed to name and describe ideas and thoughts. It follows from the definition that language cannot be employed until the ideas and thoughts to be expressed by it are formed in the mind. A knowledge of this truth must direct both teacher and pupil in all teaching and study of language.

Pupils are to be trained to speak and write fluently and correctly. To accomplish this end, daily exercises are required throughout the course. These exercises should be first in the oral form, second in the written. Special oral language lessons should be carefully taught during the first years of school work, as a preparation for reading exercises. Every school exercise should, with other ends, be treated as a language exercise. No incomplete statements or ungrammatical expressions should pass unnoticed by the teacher. By such instruction the pupils may be trained to the correct use of language. The study of technical grammar should not be introduced before the eighth or ninth year of the elementary course.

#### STUDIES.

##### *First Year.*

ORAL WORK.—1. Oral exercises, to train the pupils to talk freely and correctly with the teacher and with one another. These conversations of the children should be about well-known and interesting things, such as natural objects with which they are familiar, objects in the school-room, and in their plays. At first let the pupils use simple sentences, each one beginning with the name of the object before the mind.

2. Teach the names of plants kept in the school-room and in the school yard; the names of trees near the school-house; the names of a few common minerals; the names of a few of such common birds, fishes and insects as can be presented to the children for their observation.

3. Lessons to teach the names of qualities: as round, large, small, long, short, rough, smooth, color (red, yellow, blue).

4. Lessons to teach the names of actions: as walk, run, creep, fly, sing.

5. Present pictures of objects that have been observed, and lead the pupils to describe what is seen in the picture. This will cultivate the representative powers, memory and imagination.

6. Written exercises may be introduced the last half of the year, from copy on the black-board or from dictation. Provide each pupil with a good slate, 7 x 11, and ruled on one side, also plenty of ruled practice paper. The use of paper is better for the eyes, and it enables the teacher to preserve meritorious work.

*Suggestions.* — Cultivate pleasant conversational tones in the pupils in speaking to one another and to the teacher. Give attention to the quality of the voice used in recitation also.

In connection with lessons on names, teach the pupils to use *a* and *an*; the plural of names; the possessive case; *is* and *are*, *was* and *were*, *has* and *have*; verbs with singular and plural subjects: *The dog runs. Dogs run.*

During the first year the pupils will learn that the sentence begins with a capital letter and ends with a period. They will also learn how proper names and the pronoun *I* are to be written.

The teacher should learn to write well on the black-board that he may furnish a good model for pupils to imitate.

Alphabet learned during the year.

### *Second Year.*

ORAL WORK. — Teach simple lessons on plants, naming them and describing the parts, their number, size, color, arrangement. Have similar lessons on some common fruits and animals.

Give special instruction in the use of such words as *here*, *hear*; *be*, *bee*; *right*, *write*; *there*, *their*; *tare*, *tear*.

Continue lessons on colors, primary and secondary.

Write on the black-board some familiar words, as *book*, *apple*, *sled*, *top*, *hay*, and require the pupils to invent stories, using the words. Short stories may be read or invented by the teacher and reproduced by the pupil. In introducing stories, care should be taken that they violate neither good taste nor good morals. They should bring before the children examples of good conduct, in language well chosen and adapted to young minds.

WRITTEN WORK.—Quite largely from dictation. Select exercises in reading book to be copied in script, with capital letters, question mark and period correctly used. The elementary composition work should consist of a succession of simple sentences, each beginning with a capital letter and ending with a period or question mark, and limited to an expression of well-known ideas, obtained in the oral lessons.

*Suggestions.*—In all lessons on objects present the object itself. Lead the pupils to describe it as a whole, then teach first its oral name and second its written name; in the same order teach its parts and their qualities.

In connection with these lessons teach the pupil to use *this*, *that*; *these*, *those*; to use simple adjectives with nouns; to use *in*, *on*, *under*, *above*, *below*; to use pronouns as subjects and pronouns as objects of transitive verbs. Begin to use adverbs.

Use both slate and ruled paper. Have much written work. Make exercises simple and short. Insist on neatness, correct use of capitals, apostrophe, periods and question marks.

### *Third Year.*

Continue lessons on plants and animals, and add minerals.

Group sentences into descriptions; simple stories from local history, biography and occupations.

Lessons in elementary geography and physiology will furnish much material for oral language work.

Recitation of selections of poetry and prose.

Teach some of the most common abbreviations, Mr., Mrs., Dr., Rev., Jan., Feb., Oct., etc. Teach the use of the period in connection with abbreviations and contractions.



Prepare the pupils for letter writing by teaching the ordinary forms of the letter and of the address.

Explain the use of the hyphen and quotation marks.

From this time most of the oral training should be conducted in connection with the regular studies of the course.

WRITTEN WORK. — Continue work of second year. Elementary compositions, describing familiar objects, places, events. Practice letter writing. Require accuracy of expression and neatness in the writing.

*Suggestions.* — Teach use of pronoun with was and were: I was there. We were there. Pronoun after is and was. It is I. It was he that spoke. He told James and me. Letters written first on slate or paper, correct, and then have them neatly rewritten on paper. Pupils write from dictation.

#### *Fourth Year.*

ORAL WORK. — Continue work of previous year. Compare objects for differences and resemblances. Teach forms and use of irregular verbs, as sit, lie, sing, go.

Teach correct use of who, which, that. Use forms of who in questions: as Who is here? Whose cap is this? Whom did I see?

WRITTEN WORK. — Continue dictation exercises, for practice in constructions, punctuation, capitals, spelling, abbreviations, possessive forms, singular and plural number.

Continue letter writing, with attention to forms of letters and address of envelopes.

Brief descriptions of objects taught in the lessons. Narrative of events, as excursions, birthdays, Christmas day and other holidays.

Require written exercises on the studies of the course.

*Suggestions.* — Written descriptions of objects should observe the same order as is required in oral study: first the whole (color, form and size), then the parts, qualities and uses.

In letter writing the teacher may select the subject and name the person to whom the letter is to be directed.

All written exercises should be rewritten after correction, work in all cases to be neatly and accurately done.

Teach pupils how to use the dictionary.



*Fifth Year.*

Continue work of fourth year. Teach business forms, — bills, notes, receipts.

Oral descriptions of various objects of domestic and foreign commerce. Oral descriptions of how some common articles are manufactured.

Continue recitation of selections committed to memory from prose and poetry, with reference to improving the taste, to cultivating reverence, love of country, love of nature and admiration of moral courage.

Written exercises to follow the objective oral lessons.

*Suggestions.* — Train orally and by dictation exercises to the correct use of sit and set, lie and lay, shall and will, may and can, learn and teach, don't, doesn't and isn't, in and into, stop and stay, like and as, each other and one another.

See that the pupils are forming correct habits of thinking and of expressing their thoughts.

*Sixth Year.*

Require the pupil to study for clear ideas before writing. Choose subjects for written compositions from nature studies, elementary history, geography lessons and reading lessons.

Teach sentence, parts of sentence, formation of compound and complex sentences.

Require pupils to make an analysis of a chapter of some book they have read, and to reproduce from memory the substance of the chapter in the order in which the different parts are written. In this way attention will be directed to the arrangement of the composition, to the use of figurative language and to style.

Read the written work with the writer, criticise the faults, commend the excellencies, and then have the composition rewritten.

*Seventh Year.*

Teach parts of speech by the use of sentences in which the different parts are constructed; noun as subject, verb as predicate, adjective as limiting the meaning of noun, adverb as limiting meaning of verb, preposition as connecting words, conjunction as connecting sentences, pronoun as used to repre-

sent a noun, interjection as expressing a strong feeling. Teach other uses of the noun in the sentence.

Teach forms of the different parts of speech in connection with their uses. Require pupils to construct sentences illustrating the various changes in the forms of words.

Continue written composition as conducted in the sixth year.

### *Eighth Year.*

Begin the study of technical grammar. Teach the construction of written composition in accordance with a logical method.

Teach by illustration of the method:—

1. How to choose a subject.
2. How to think of it first as a whole.
3. How to make divisions of the subject.
4. How to arrange divisions in the composition.

Teach how to construct the beginning of the composition; how to construct the ending when a formal beginning or formal ending is required. Require much practice in writing by the use of this method.

Criticisms to be made by reading and correcting with the writer, or use the following plan, writing the marks suggested at the beginning of the lines.

V̄,	.	.	.	.	.	.	.	wrong spelling.
Φ,	.	.	.	.	.	.	.	grammatical error.
O,	.	.	.	.	.	.	.	wrong capital.
X,	.	.	.	.	.	.	.	wrong selection.
P,	.	.	.	.	.	.	.	wrong punctuation.
+	.	.	.	.	.	.	.	wrong repetition.
—,	.	.	.	.	.	.	.	wrong omission.
?	.	.	.	.	.	.	.	doubtful in fact.
!	.	.	.	.	.	.	.	bad taste.

### *Ninth Year.*

Continue the work of the eighth year.

Train the pupils to criticise as the compositions are read before the class. Make divisions of the class. Require one division to criticise the reading, another the grammar, another the use of figures, another the style, another the method.

Require the composition to be rewritten.

*Suggestions.*—Require selections to be committed to memory throughout the course.

Direct the reading of the class.

Require but two compositions the ninth year of the course.

#### READING.

**DEFINITION.**—Reading, as understood in the schools, is forming ideas and thoughts occasioned by the printed or written words used as names of the ideas and as expressions of the thoughts. This is sometimes called silent reading, to distinguish it from the oral form, which adds to silent reading oral expression by the reader for the information of the hearer.

From the definition of reading may be derived a plan for teaching the subject. The plan will include, first, a preparation for reading. This is to be made by the use of language lessons, which have been provided for under the subject, language lessons. Secondly, much practice in reading itself, which requires the reader to form his ideas and thoughts by the use of language. The requisite of silent reading is, read so as to understand. The requisites of oral reading are, (1) read so as to be heard, (2) read so as to be understood, (3) read so as to be felt. The first requisite of oral reading is to be secured by giving proper attention to the quantity and quality of the voice; the second requisite directs attention to pronunciation, to emphasis, to inflection and to accent; the third requisite is to be attained by observing the directions for attaining the other two, by training the young readers to feel while reading as they would have their hearers feel, and by adapting the tones of the voice to emotions they would excite.

Good reading must be fluent, natural and with proper tones of the voice.

Fluent reading implies an easy pronunciation of the words, without hesitation, and with tones of the voice adapted to the sense:—

1. Fluency may be secured by teaching the pupil to comprehend the meaning of phrases and sentences readily, instead of directing his attention to letters and to single words.

2. By using short, simple sentences at first, following the same plan as the one adopted in the language lessons.

3. Much practice in easy reading.

4. Care should be taken that the reading book is adapted to the ability and acquirements of the pupil.

5. Do not break up the reading too much by correcting errors.

Natural reading is conversational in its style. It is produced by training the pupil to read to some one as he would talk to him. If the reading is not natural, it must be for the reason that the pupil does not understand his lesson, or he has acquired bad habits, or he is not at ease in the presence of his class or his teacher. All these obstacles to natural reading should be removed by teaching thoroughly what is not understood, by leading the pupil to see in what his bad habits consist and showing him how they may be avoided, by preventing all improper notice of mistakes, and by avoiding all harsh criticisms. The pupil should feel safe in the presence of his class and under the direction of his teacher.

To secure the right use of the voice, there must be special training of the vocal organs. This should include exercises in producing the elementary sounds of the language, as represented by the vowels and consonants, with reference to securing pure tones, and distinct utterance.

The teacher should illustrate the requisites of good reading by examples. It is thought better not to read for the pupils the same passages which they are themselves to read. They are to read not from imitation merely, but from their ideas of the sense to be expressed.

### *First Year.*

Vocabulary of first year, two or three hundred words taught, from objects and read in simple sentences at sight. Spend twenty weeks, or one-half of the school year, on such work. Take from forty to fifty words during the first two months, and from fifty to eighty words during each of the following three months. For the remaining time, read from books.

Use the ordinary primer or first reader, reading such lessons only as contain simple sentences, that may be easily known

at sight. Read from several sets of different readers. It is well to have a sufficient number of different books, so that a selection need not be read more than once. Let the lesson be fresh and new for every recitation.

Teach the meaning of unfamiliar words objectively; write the words in script on the black-board. Cover each quickly with a book, and require it to be spelled from memory. If this cannot be done, remove the book and have the word spelled at sight. Then have the word used in good original sentences.

Reading in turn by the class not allowed. Require every member to look through the same paragraph, and to raise the hand as soon as ready to read.

The teacher should correct faulty reading by leading the pupil into a clear understanding, not by leading him to imitate an example.

Require special emphasis to be placed in turn upon the different words of a sentence, as named by the teacher.

*Suggestions.* — Have a few words in each lesson, spelled by sound, for vocal training.

If the class is large, teach it in small groups.

It is well to read the first half of several first readers before completing any.

A good supply of supplementary reading should be provided.

### *Second Year.*

First reader continued. Teach the meaning of new words objectively, the written form by the use of the black-board, and the spelling as before described. Use the new words in original sentences. This is the best preparation for the reading exercise.

After completing first readers, introduce the first lessons of one or more easy second readers.

Have the paragraphs of the lesson read over by one member or by different members until they are read in a right way.

The teacher should acquire the habit of writing rapidly on the black-board, and of asking intelligent and important questions in an orderly manner.

*Suggestions.* -- At the close of each lesson require one or more members of the class to reproduce the story from memory.



At the close of the reading of the lesson spend a few minutes in teaching the new words of the next lesson.

Continue the phonic drill for pure tones and distinct utterance.

A good selection of books for supplementary reading.

### *Third Year.*

Use one or more second readers and one easy third reader.

Observe with care previous directions for introducing new lessons.

Continue to teach the meaning of all new words before the lesson is studied.

*Suggestions.* — For sight reading it is not necessary that each pupil in the class should have a book of his own. Secure attention of those who are without a book by requiring them to reproduce the substance of the passage read. Require the pupils to read to the class. Arrange the class in the form of a semi-circle, that they may all be in the presence of the reader and may hear the reading.

A very brief familiar talk about the lesson should precede the reading.

### *Fourth Year.*

The first half of several third readers.

Observe previous directions.

If the pupils are limited to reading single sentences or paragraphs, they will not acquire the power of continuous reading of entire selections in an interesting and effective manner. Each pupil of the class, therefore, should have an opportunity at convenient times to read an entire selection.

Commence the use of the dictionary.

### *Fifth Year.*

Read the last half of several third readers, the same books as in the fourth year. Introduce much supplementary reading of same grade. English classics, such as fables and fairy tales.

*Suggestions.* — Allow pupils to criticise the reading. The criticisms should be justly and fairly made, not of unimportant mistakes, such as "left out *it*," and "put in *of*," but of some essential excellencies and defects pertaining to distinctness, rapidity, pitch, expression, etc.

*Sixth Year.*

One fourth reader, supplemented by several easy English classics. At this time the pupils should be able to read these books at sight. The readers are no longer needed except for special exercises, the classics are cheaper and far more instructive, and they exercise an important influence in the cultivation of a taste for good reading.

The lessons should be examined thoroughly before reading is attempted. Be sure that every passage read is understood before the reading. Discuss the meaning of the more difficult passages with the class. In this way excite an interest in the lesson.

Direct special attention to the use of figurative language employed, and teach the pupils to use it in its simpler forms in their compositions. This work will exercise the imagination, and cultivate the taste.

*Seventh Year.*

One fourth reader. Sight reading from other books, papers and magazines. Continue use of easy English classics, prose and poetry.

Observe the directions for the preceding year.

Continue the use of the dictionary to find the definition of words in the lesson and their right pronunciation.

Continue phonic analysis. Encourage pupils to practise oral reading at home in preparation for class reading.

A plan for the study of a reading lesson should be shown. In it a general notion of the selection will be first acquired, and particular notions later.

*Eighth and Ninth Years.*

As a means of training the pupils to read, and at the same time to interest them in authors and literature, take note of the birthdays of authors, by having read and recited selections from their writings. Selections may be found in the educational publications, and may be readily supplied for the use of the class.

*Suggestions.*—1. Great care should be taken throughout the course to teach the meaning of the words and sentences read.

2. To teach the correct pronunciation of the words.
3. To so train the vocal organs that they may produce pure tones and distinct articulation.
4. To train the pupil to distinguish good literature, and to so cultivate his conscience and his taste that he will read no other.

NOTE. — During the eighth and ninth years the class in reading should be supplied with books containing selections from the writings of Longfellow, Whittier, Holmes, Hawthorne, Lowell, Franklin, Thoreau, Bryant, Irving, Scott, Fiske, Emerson and Burroughs. Such reading will cultivate literary taste and create a love for good reading.

#### SPELLING.

##### *First Year.*

The first spelling exercises may consist of copying from the black-board words used in the reading lessons. When the names of the letters are known, oral spelling may be introduced. The words used in the spelling lessons may be those found in the reading exercises.

##### *Second Year.*

Words for the spelling exercises, selected from the reading and the language lessons and from other lessons. Selections limited to short, common words.

METHOD. — Both oral and written method. Important words to be written in blank books and preserved for review. Dictation of words constructed in sentences.

##### *Third Year.*

Words selected from reading lessons, other words in common use in any of the school exercises.

Require much practice on words frequently misspelled, as receive, believe, there, their, which, whose, through, father, ought, aught, color, eight, peace, piece, hail, hale, pane, pain, flower, flour, Wednesday, February. Dictate these words in sentences in which the words are correctly used.

Spelling chiefly by the written method. Words misspelled corrected by the teacher, and afterwards spelled correctly many times by the pupil.

*Fourth Year.*

Use spelling-book and readers. Oral spelling of all new words as well as by writing. Words written on spelling blanks, or in books prepared for written spelling.

*Fifth to Ninth Years.*

Use spelling-books and readers, histories, etc. Spelling chiefly by the written method.

*Suggestions.*—In oral spelling have pupil pronounce the word before spelling. Have syllables separated by a pause or by pronunciation. Allow but one trial by each pupil.

In written spelling direct attention to use of capitals; the apostrophe in possessives; to words of the same oral form but of different written form, as to, too, two; buy, by; peace, *piece*; to abbreviations.

Words dictated by the teacher for spelling, should be pronounced distinctly and but once.

Words may be dictated in phrases and in sentences. This may be done to show the meaning of words by their use in the sentences, and also to break up the monotony arising from dictating single words without regard to their construction or use. Sometimes group words belonging to special subjects, as plants, animals, minerals, geographical names, fruits, etc.

Select a word, as scholar, and have pupils form words from it, first words beginning with s, then with c, and so on.

In written spelling slates or papers may be examined and marked by the teacher, or by one of the pupils, or by pupils exchanging papers; or each pupil may mark his own spelling, the correct form being given by the teacher. In all cases misspelled words should be rewritten correctly.

Review lessons may consist in spelling again words that have been misspelled. Spelling should be thoroughly taught.

## WRITING.

Special instruction and training in penmanship should continue throughout the course.

*First Year.*

**STEPS.**—While the pupils are learning to copy words and sentences they should also be learning to make the single letters. Teach them in the following order,—i, u, w, n, m, v, x.

*Suggestions.* — Make the copy on the black-board in the presence of the pupils. Have black-boards ruled for the purpose. Pupils should have ruled slates and long, well-sharpened pencils. Keep pupils at work upon each letter until they can make it well. Introduce the writing of short words early, and have the letters connected with the proper curve lines. Give attention to the form of the letters and to the manner of holding the pencil; insist upon an erect position of the body, with both feet firmly upon the floor in front. If a pupil is occupying a seat too high for him, change him to a lower one, or provide some support for the feet.

### *Second Year.*

STEPS. — Continue small letters in following order, — o, e, c, r, s, a, d, p, t; with capitals in groups: A, N, M; O, C, D, E, H, K; B, F, G, L, P, R, S, T; I, J, Q, U, V, W, X, Y, Z.

*Suggestions.* — Continue practice upon slates, and also use ruled paper and lead pencils. The spaces should be narrower than during the first year, and equal on both slate and paper.

Introduce tracing-books with pen and ink. As soon as ink is used each pupil should be provided with a blotter, a pen-wiper and good ink. Exercise care to keep the ink in proper condition for use.

### *Third Year.*

STEPS. — Complete small letters and capitals. Teach each letter from the black-board, and drill on practice paper.

Use No. 1 copy-books. Give attention to position of body, arm and fingers.

*Suggestions.* — Give attention to height, slant and spacing of letters. Drill class together on practice paper by count. In copy-books allow individual work but no hurrying.

### *Fourth to Ninth Year.*

STEPS. — During the remainder of the course carry on the following work: —

a. Copy-book practice.

b. Movement exercises in concert, using black board, slate and paper, to secure free use of arm, hand and fingers. (1) Hand as whole; (2) four nails; (3) two nails; (4) pencil or pen inverted; (5) pen in position. Illustrate movement first on black-board, and have class work by count.

In these exercises attend first to movement, second to form.



c. Teach carefully the elements of the letters, and train the pupils to criticise the height, slant, spacing and shading of the letters, their own and others.

d. Have occasional practice in writing sentences and paragraphs copied or from dictation, as tests of penmanship.

*Suggestions.*—The drill on movements and on the elements of the letters should be in concert. The copy-book work may be individual.

The older pupils should have regular exercise in penmanship at least twice a week, the younger ones more often.

Every written exercise should be an exercise in penmanship, no careless writing being allowed to go unnoticed.

Teach to make the figures in the following order, — 1, 4, 7, 0, 6, 9, 2, 3, 5, 8.

All should have practice in writing each session. This should be principally with the pen.

Pupils should not be allowed to leave a lower copy-book for a higher one until they can do the work of the lower one well.

During the first part of the course in writing *legibility* is the chief aim, but before the pupils leave school they should be able to write both *legibly* and *rapidly*. The pencils and pens used for the writing exercises should be kept by the teacher and distributed at each exercise.

To secure correctness of forms and legibility in writing, have frequent criticisms of one another's work by the pupils.

#### ENGLISH GRAMMAR.

The study of English grammar should begin with the eighth year in school. If the pupil has been rightly trained through the previous years of his course in the practical use of language and in the construction of sentences, he will be prepared by the eighth year to take up the study of the grammar of his language. This subject should be presented to the pupil not by definitions, committed to memory from the books, but by an analysis of the language itself.

NOTE. — The method of presenting the topics in grammar to the class is illustrated by the way in which the following definition of grammar is derived. It is the purpose of the definition to bring the subject, grammar, directly before the mind of the pupil.

*Eighth Year.*

STEPS. — Illustrate and define grammar.

Expression for analysis, *The leaf is green.* The word leaf, subject; define. The word green, attribute; define. The word is, copula; define. An expression made of subject, copula and attribute is a proposition; define. The words called the subject, copula and attribute of the proposition are written with their right forms and right arrangement. These right forms with their right arrangement make a right construction of the proposition. Construction; define.

Definition of grammar: Grammar is a knowledge of the right construction of propositions.

General divisions of grammar: —

1. The proposition.
2. Kinds of propositions.
  - a. According to general form.
  - b. According to general structure.
3. Parts of propositions.
  - a. Clauses.
  - b. Phrases.
4. Classes of words.
  - a. Kinds of words in the sentence.
  - b. Grammatical forms.
  - c. Relations in the sentence.

1. The proposition: —

The proposition has been illustrated and defined in obtaining the definition of grammar.

2. Kinds of propositions: —

a. According to general form.

- (1) Declarative: Illustration, *He is going home.*
- (2) Interrogative: Illustration, *Is he going home?*
- (3) Imperative: Illustration, *Go home.*
- (4) Exclamatory: Illustration, *How it rains!*

b. According to general structure.

- (1) Simple: Illustration, *The boy has gone.*
- (2) Compound: Illustration, *John comes and James goes.*
- (3) Complex: Illustration, *The boy, who told me, has gone.*

3. Parts of propositions: —

Clause: Illustration, *Life is short, and art is long.*

Kinds according to rank : —

- a. Independent : Illus., *Charles came* when the bell rang.
- b. Subordinate : Illustration, Charles came *when the bell rang*.
- c. Co-ordinate : Illustration, *John reads* and *James listens*.

Kinds according to use : —

- a. Noun clause : Illustration, *How long we shall stay* is uncertain ; or substantive clause, Illustration, I knew *he would come*.
- b. Adjective clause : Illustration, The book *which you have* is new.
- c. Adverbial clause : Illustration, He stood *where I could see him*.

Phrase : Illustration, He speaks, *with a clear voice*.

4. Classes of words in the proposition : —

Parts of speech : —

- a. Noun : Illustration, That *man* is a sailor.
  - b. Pronoun : Illustration, The boy studies *his* book and *he* learns *his* lesson.
  - c. Adjective : Illustration, I have a *white* rabbit in *this* box.
  - d. Verb : Illustration, The boy *is* young. The boy *runs*.
- Participles : Illustration, I saw a boy *cutting* wood.  
My watch is *gaining*.

Infinitives : Illustration, He tried *to study*. *Thinking* is *to compare* ideas.

- e. Adverb : Illustration, The bird flies *swiftly*. Mary studies *very diligently*.
- f. Preposition : Illustration, The blackbird is singing *on* Michigan's shore.
- g. Conjunction : Illustration, As sweetly *and* gaily as ever before.
- h. Interjection : Illustration, O, hail ! *Oh !* I would like to be a king.

*Suggestions.* — Teach that a word may belong to different parts of speech in different propositions.

Example : *Truly* is an adverb. Noun : Any word becomes a noun when it is used as a name of itself.

Example : The pupil *who* studies will learn. Conjunctive use of *who*. The word used to connect two clauses has a conjunctive use.

Example: Two *and* two are four (equals two *with* two are four). And: preposition. Preposition is used to connect words.

Remark: The teacher should require many applications to be made by the class in constructing in sentences the words whose definitions have been taught.

5. Grammatical forms:—

a. Number: Illustration, The *star* is bright; The *stars* are bright. Number, singular, plural.

Show how plurals of nouns are formed. 1. Regular plurals. 2. Some exceptions.

b. Gender: Illustration, The *Prince* has come; The *Princess* has come. Gender, feminine, masculine, neuter.

Teach that sex is usually shown by different words rather than by different forms of the same word.

Example: The *boy* is going to school; The *girl* is going to school.

c. Case: Illustration, *Morse* invented the telegraph; *Morse's* invention made his name immortal.

Teach case: 1. Nominative or simple case; 2. Possessive.

How form the possessive case of nouns: 1. Singular; 2. Plural. Of nouns ending in s.

NOTE. — Have the pupils write many sentences in application of their knowledge of number, gender and case forms of nouns.

6. Pronouns:—

Pronoun: Illustration, *I* will read. *You* may listen.

Personal pronoun: Illustration, *I*, *You*.

Grammatical forms: Illustration, person, gender, number, case.

Relative pronouns: Illustration, name relative pronouns, who, which, what, that and compounds. Grammatical forms of who.

NOTE. — No relative pronouns have forms except who and its compounds, which have case forms.

Adjective pronouns: Illustration, name adjective pronouns, some, any, all, each, every, few, that, this, one, other. Grammatical forms of this, that; plurals; one, other, have possessive and plural forms.

NOTE.—Have exercises in constructing the personal, relative and adjective pronouns in sentences.

Adjectives: Grammatical forms. Comparison: Illustration, wise, wiser, wisest.

Degrees of comparison: Illustration, positive, comparative, superlative.

Have exercises in constructing these forms of the adjective in sentences.

NOTE.—Many adjectives, instead of changing their form to express degrees of quality, are limited by the adverbs more and most. Illustrate. Many adjectives cannot be compared on account of their meaning: Example, perfect, square, this. Some adjectives are irregularly compared: Example, good, better, best.

#### 7. Verbs:—

Teach kinds of verbs according to relation of attribute to the verb: 1. Copulative, He *is* good; 2. Attributive, He *walks*.

According to use with or without an object: 1. Transitive, Boys love *fruit*; 2. Intransitive, He *sleeps*.

According to form of past tense: 1. Regular, He *laughed* outright; 2. Irregular, The horse *ran* away. List of irregular verbs.

NOTE.—Exercises in the use of the above verbs.

Grammatical forms:—

1. *Voice*: Illustrate, Active voice, The boy threw the ball; passive voice, The ball was thrown by the boy.

NOTE.—Exercise in writing verbs in the active and passive voice.

2. *Mode*: Illustrate, Indicative mode: Illustration, Birds fly; potential mode: Illustration, Birds can fly; subjunctive mode: Illustration, If it rains, we cannot go; imperative mode: Illustration, Go, and obey.

NOTE.—Exercises in the use of two different modes of the verbs.

Tense: Illustrate, Present tense: Illustration, I depart; past tense: Illustration, I departed; future tense: Illustration, I shall depart.

Number and person: Illustration, I come, Thou comest, He comes, We come, You come, They come.



NOTE. — Exercises in the uses of the tenses, numbers, persons of the verbs.

Participles: Forms. Imperfect: Illustration, James is *writing* a letter; perfect: Illustration, *Having* written the letter, etc.

Teach the use of the participle, and how limited.

Infinitives: Forms. Imperfect: Illustration, He promised *to give*; perfect: Illustration, *To have given* wisely is a pleasure.

Sign of the infinitive. Infinitive, how limited. Uses of infinitive, as subject, object, adjective, adverb.

8. Prepositions: —

Use of prepositions.

9. Conjunctions, kinds: —

a. Subordinate: Illustration, I will go *if* I can.

b. Co-ordinate: Illustration, Life is short *and* art is long.

c. Correlatives: Illustration, It will *either* snow *or* rain.

Have many exercises in constructing conjunctions in sentences.

10. Interjections: —

Illustration, *O* for a lodge in some vast wilderness!

Uses and punctuation of “O” and “Oh.”

### *Ninth Year.*

11. Analysis of propositions. Illustrate the analysis.

STEPS. — a. State the proposition.

b. State the complete subject and complete predicate.

c. State the grammatical subject and grammatical predicate.

d. State the elements that limit the subject. Analyze each in full by describing the kind of element, the basis and its limitation.

e. State the elements that limit the predicate element, and analyze them in same way.

Relations of nouns in the proposition: —

(1) As subject: Illustration, *Snow* is white. Rule for construction of subject.

(2) As attribute: Illustration, Time is *money*. Rule. (The same in the following cases.)

(3) As limiting another noun by naming the possessor: Illustration, This is *John's* book.

(4) As limiting another noun by giving another name for the object: Illustration, Solomon the *son* of David was a great king.

(5) As used independently: Illustration, *John*, study the lesson.

(6) As object of the verb: Illustration, I found a *knife*.

(7) As the object of a preposition: Illustration, I saw him on the *hill*.

(8) As used absolutely: Illustration, The *sun* rising, we pursued our journey.

(9) As used adverbially: Illustration, He remained a *day*.

(10) As indirect object of the verb: Illustration, I gave the *boy* a knife.

(11) As objective attribute: Illustration, They made the man *president*.

*Suggestion.*—In each of the above cases a rule should be derived for the construction of the noun in the sentence, and examples prepared by the pupil illustrating the rule.

*NOTE.*—Naming a kind of word in the proposition, describing its form and its use and deriving a rule of construction, implies a knowledge of the grammar of the language, and is called parsing.

Relation of pronouns in the proposition. Personal pronouns:—

(1) As subject of the proposition: Illustration, *I* rejoice.

(2) As attribute: Illustration, It is *he*; It is *they*.

(3) As an object: Illustration, I see *him* now.

(4) As used absolutely: Illustration, *He* coming, I did not go.

(5) Teacher explain the propositions: It rains; It is dark; It is two o'clock; It is pleasant to see the sun.

*NOTE.*—The personal pronoun is used in all the noun relations except the adverbial.

Relation of relative pronouns in the sentence:—

(1) As having a noun use and a conjunctive use: Illustration, Solomon, *who* was the son of David, was king.

(2) As possessive: The boy *whose* book is lost has left school.

(3) As object of a verb; as object of a preposition; as used independently.

NOTE. — The relative pronoun is used in six of the noun relations.

Relations of the interrogative pronoun in the proposition.

Interrogative pronouns have a noun use, and also serve to introduce a question.

Relations of adjective pronouns in the proposition.

As having the use of nouns and adjectives: Illustration, *That* is a book; I bought *that* book.

Relations of adjectives in the proposition. As limiting the meaning of a noun: Illustration, The *wise* man foreseeth the evil.

Relations of the verb in the proposition.

STEPS. — (1) Principal parts of the verb: Illustration, I love, present tense; I loved, past tense; I have loved, past participle.

(2) Synopsis of the verb: Illustration, with the verb love, in the active and passive voice.

(3) Teach auxiliary verbs, in common use.

Have constant practice in applying rules of construction of sentences, after the rules have been derived.

## ARITHMETIC.

### *First Year.*

STEPS. — Teach by means of objects the numbers from 1 to 10.

Teach all the combinations in each number both by their unions and by their separations.

Make easy problems using these combinations and teach the pupils to make similar ones.

Have much practice in adding single columns, sum not to exceed 10; verify by subtracting.

Practice with toy money.

Teach to express the numbers by figures.

Teach, — One-half of 2, 4, 6, 8, 10.

One-third of 3, 6, 9.

One-fourth of 4, 8.

Teach Roman numerals to X.

Teach pint, quart, inch, foot, yard.

Teach to distinguish halves, thirds and fourths.

Combine halves; thirds; fourths.

Change halves to fourths, fourths to halves.

*Suggestions.*—Teach each number and all the combinations involved in it before proceeding to the next higher number. Thus: teach four, first as a whole by showing four objects; then in succession three and one, four less one, one and three, four less three, two and two, four less two, four less four; two twos, four ones; ones in four, twos in four, fours in four.

Compare each number taught with each smaller number to find how much greater or less one is than the other and to find their difference.

Drill first with counters, then without.

When the pupils have learned to *five* with the help of the teacher, they should have learned the order, and be able themselves to make the combinations in the larger numbers, and to invent little problems illustrating them: “I had seven apples and ate two,” illustrating the separation with counters.

For counters, blocks are best, but any convenient objects may be used.

The teaching can be done best by gathering the pupils about a table on which their counters are placed. Each pupil should have enough counters to make all the combinations.

If the class is large, teach but a part at a time, so as to secure the closest attention from every one. More can be accomplished in five minutes with all attentive than in fifteen with a part inattentive.

When the combinations with objects seem to be thoroughly learned, drill on the same combinations without objects.

If the pupils are not sure of a combination require them to learn it with their counters.

Aim first at *accuracy*, then at *rapidity*.

Train to make figures neatly.

### *Second Year.*

STEPS.—Teach numbers to 20, all combinations in each by unions and separations, and by comparisons.

Add by twos, threes, fours, and fives and so on, to 20.

Subtract by twos, threes, fours, and fives and so on, from 20.

Problems involving small numbers with one operation, and to a limited extent with more than one.

Continue practice with toy money.

Practice single column additions, sum not to exceed 20; verify by subtracting.

Tables made and recited by pupils, in addition, subtraction, multiplication and division.

Teach ordinals to twentieth. Roman numerals to XX.

*Suggestions.* — In teaching numbers from 10 to 20, teach the ten as one group, one ten and one, one ten and two, etc., two tens.

Teach signs  $+$   $-$   $\times$   $\div$   $=$  for convenience in black-board work, and have limited practice in their use.

In teaching these numbers show the analogy

	1	1	2	1	3	2
between	$+ 1$	$+ 2$	$+ 1$	$+ 3$	$+ 1$	$+ 2$
	—,	—,	—,	—,	—,	—, etc.
	2	3	3	4	4	4
	11	11	12	11	13	12
and	$+ 1$	$+ 2$	$+ 1$	$+ 3$	$+ 1$	$+ 2$
	—,	—,	—,	—,	—,	—, etc.
	12	13	13	14	14	14

Use numeral frame.

Splints and wooden tooth-picks are useful, as they can easily be made into bundles of ten.

Teach the fractional parts of the numbers by counters, as one-third, two-thirds, three-thirds of 12.

In same manner teach halves, fourths, fifths, sixths, sevenths, eighths, ninths and tenths of divisible numbers.

Teach the fractions, half, fourth, eighth, third, sixth, ninth, fifth, tenth, seventh, with changes and combinations.

Teach to make multiplication tables in following form:—

1	3	3	Read, 1 three is 3
2	3	6	“ 2 threes are 6
3	3	9	“ 3 threes are 9
4	3	12	“ 4 threes are 12

The table may have to be made many times before being memorized.



For rapid drill work such forms as the following may be kept on the black-board, or on paper charts:—

3	2	1	4	5	6	7	8	
+ 2	4	5	3	4	3	5	2	
—	—	—	—	—	—	—	—	
4	3	6	5	7	8	9		
— 3	2	4	2	3	5	4		
—	—	—	—	—	—	—		
2	2	2	2	2	2	2	2	2
× 3	2	1	8	4	6	5	7	9
—	—	—	—	—	—	—	—	—
2) 2	6	14	10	8	12	18	4	
—	—	—	—	—	—	—	—	

Combine multiplication with addition, as — three fours and two; three twos and one.

Divide with remainders, as — threes in ten.

### *Third Year.*

STEPS. — Teach tens to 100. Express by figures.

Teach tens and units to 100. Express by figures.

Teach hundreds, tens, and units to 1,000. Express by figures.

Teach to add and subtract by tens.

Teach to add and subtract between the tens, as  $3 + 4$ ,  $13 + 4$ ,  $23 + 4$ ;  $7 - 3$ ,  $17 - 3$ ,  $27 - 3$ .

Teach to add and subtract from one ten to next, as,  $7 + 5$ ,  $17 + 5$ ,  $27 + 5$ ;  $12 - 7$ ,  $22 - 7$ ,  $32 - 7$ .

Teach to make multiplication tables to  $12 \times 12$ .

Teach to add by twos, threes, fours, etc., to 100.

Teach to subtract by twos, threes, fours, etc., from 100.

Teach easy problems involving these combinations.

Teach fractional parts, especially of divisible numbers, to hundredths.

Teach fractions of previous year, also elevenths, twelfths, fiftieths and hundredths, with their expression by figures and their combinations.

Teach Roman numerals to C. Continue practice with toy money. Teach coins to dollar.

Practise single column additions, verifying with subtraction.

Teach written addition, subtraction, multiplication and division, numbers not to exceed 1,000.

Use multipliers and divisors less than 12.

Teach liquid and dry measures. Long measures.

*Suggestions.* — Use numeral frame and bundles of splints for tens and hundreds. Show that the figure representing the number of tens is always written in the same place. Here show use of decimal point, and always write it. Show its use in writing dollars and cents.

In teaching the combinations of numbers above 20, show their analogy with those below 20.

Group the tens in bundles and add the units and tens separately, thus, two tens and one with two tens and two equals four tens and three, etc. After teaching and writing as far as 40, require pupils to form and name the numbers of the next group, then to express them. Require pupils to read the next group from teacher's figures and to express the numbers with splints. Continue to 100.

Make bundle of ten tens for 100. Show hundreds to be expressed in third place.

Show by a few groups how numbers above 100 are formed and expressed, as — one hundred, two tens, and five ones, 125, then require pupils to read numbers to 1,000 and to explain their formation, thus: 473 is four hundreds, seven tens, and three ones.

Pupils should learn the measures of length and capacity by seeing and using them. They should have much practice in measuring the length of objects in and about the school-house, and they should be taught to *estimate* lengths and distances. As fast as the units of measure are learned they should be used in problems.

#### *Fourth Year.*

STEPS. — Addition, subtraction, multiplication and division not to exceed 10,000. Multipliers and divisors larger than 12.

Add in columns United States money, dollars and cents, using dollar sign and decimal point.

Have oral work in combinations with much rapid written work.

Problems may be dictated, or taken by the pupils from books, cards or black-board.

Both teacher and pupils should make problems requiring one and more than one operation.

Teach to change fractional numbers to integers and mixed numbers, and the reverse. Oral.

Teach to combine like and unlike fractions to twelfths, using discs and diagrams.

Percentage introduced; also liquid and dry measures with changes and combinations.

Teach units of avoirdupois weight and time. Square measure illustrated with diagrams and blocks.

Roman numerals to M.

*Suggestions.* — To secure independent work and to prevent copying assign different examples and problems to different pupils.

Use the drill tables prepared for the purpose and found in some of the text books, and have a great variety and number of examples in all subjects written on numbered cards, with the answers in a book kept for the purpose.

Black-board work in arithmetic should not usually be concert work, nor work that has been previously done by the pupils.

Always use objects for teaching fractions, something which can be exactly divided. Sticks a foot long with the divisions marked plainly and cardboard circles cut carefully into the different fractional units to twelfths, are useful means of illustrating fractions. There should be much practice in changing and combining fractions.

Use toy money in making change. Bits of paper or cards marked to represent the coins to one dollar will do. Make change by *adding*, thus: 27 cents from a half dollar,  $27 + 3 + 10 + 10 = 50$ .

Train the pupils to analyze their problems and not to depend on the teacher to explain them. Do this by selecting simple problems and having the steps in the work written out in detail.

Illustration: If a man has \$200, and buys a horse for \$75, and a harness for \$32, how much money will he have left?

*Pupil's Work.*

\$75 = cost of horse.

\$32 = cost of harness.

\$75 + \$32 = cost of both.

\$107 = cost of both.

\$200 = money he had at first.

\$200 — \$107 = money he had left.

\$93 = money he had left.

A few problems so worked are more helpful than many worked with the aid of the teacher.

Avoid having pupils repeat forms of solution they do not fully understand.

Problems may be dictated to pupils to be answered off-hand.

*Fifth Year.*

STEPS. — Reading and writing numbers to billions, and decimal fractional numbers to thousandths.

Fundamental operations thoroughly reviewed, with daily practice to secure rapidity and perfect accuracy.

Use decimal fractions to thousandths in addition and subtraction, and in multiplication and division by integers.

Addition, subtraction and division of like and unlike fractions. Teach together multiplication of fractions and compound fractions.

Continue easy exercises in percentage.

Teach prime numbers and factoring of numbers.

Teach units of square and cubic measure, illustrating with diagrams and blocks. Make practical problems in measuring surfaces in the school-room and school-yard, and in finding contents of rooms, bins, boxes and piles of wood.

*Suggestions.* — In all work with fractions use small numbers. Pupils can be aided in writing decimal fractions by noticing how dimes and cents are written with dollars. In making tables of compound numbers, have pupils find by trial how many of each kind of units in the next larger, and make the tables themselves.

Pupils should be able to explain by diagram how to find the area of surfaces. Avoid such expressions as “feet by feet gives square feet.”

In practical problems have the pupils make their own measurements and give their own explanations.

*Sixth Year.*

STEPS. — Keep up practice in fundamental operations and in such oral work as is found in books on mental arithmetic.

Practise making bills and receipts.

Continue work in common fractions, classifying the operations as follows: —

1. Changes, or reductions.
2. Adding, subtracting and dividing of like, then of unlike fractions.
3. Multiplication of fractions, or compound fractions.
4. Complex fractions.

Decimal fractions following same order as in common fractions, and including the changing of decimals to common fractions and the reverse.

Continue exercises in percentage without time, changing per cents to fractions and the reverse, also finding per cents as fractional parts.

*Suggestions.* — If the class is studying from a book in mental arithmetic, the recitation should not be of problems previously studied but of similar ones given by the teacher. This will test the pupil's power to think better than memorized solutions. Teach a plan of arithmetical analysis.

In work in fractions let oral work precede written work throughout. In written work keep the denominators small. Drill on each operation, using a multitude of examples having small numbers.

*Seventh Year.*

STEPS. — Compound numbers. Review all units previously learned and add weights and measures not already introduced.

Operations on compound numbers. Reductions ascending and descending.

Fractional parts of 100,  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{8}$ ,  $\frac{1}{10}$ . Fractional parts of 30 and 60.

Percentage, without time, profit and loss, commission, etc., easy problems.

Teach as hundredths and apply not only to money but to all kinds of units.



Continue arithmetical analysis of problems.

*Suggestions.* — Restrict the operations upon compound numbers to learning how to perform them, and to the application of such a number of the tables as will give a knowledge of the principles involved.

Secure freedom in working in percentage by training on such examples as the following before applying to problems: Express  $\frac{1}{4}$  as per cent.; 20% as a common fraction; 4% as a decimal fraction.

Use in examples different ways of expressing per cent., in the following order:  $\frac{4}{100}$ , .04, 4 per cent., 4%.

Use other kinds of units before applying to United States money, as, — 6% of 250 books, pens, horses, men, dollars, and in all drill work use a variety of units.

Train pupils to select the shortest method of work, as, — 20% of \$5 =  $\frac{1}{5}$  of \$5. Have much oral work with small numbers.

### *Eighth and Ninth Years.*

STEPS. — Continue application of percentage without time to profit and loss, commission, brokerage, stocks and insurance.

Interest, simple and compound with limited practice in partial payments.

Discount, business and bank.

Teach metric system.

Ratio and proportion with their application to partnership.

Involution and evolution with limited practice.

Mensuration of surfaces and solids.

Reviews with reference to facility and accuracy in operations.

*Suggestions.* — In using a book of problems the teacher should be sure that the pupils understand the language in which the problem is stated. Problems growing out of business transactions, as in commission, banking, taxes, insurance, often contain technical terms. These should be explained before the lesson is assigned.

A useful practice is to require pupils to make problems introducing common business transactions.

Specimens of all business papers talked about should be shown, and the pupils should be taught to write notes and orders. The essential parts of such papers should be carefully taught.

A few of the most important principles connected with commercial papers should be taught. Among these are the negotiability of notes, the liability of endorsers, the use of bank checks. Teach also the nature of bank-notes and the various kinds of paper money issued by the government.

Recitations by topical method.

During the last two years of the course pupils should be assisted to frame definitions, to state rules for the various operations, and to give an analysis of arithmetic and of its branches.

### BOOK-KEEPING.

#### *Sixth Year.*

Lessons preparatory to the study of book-keeping may be given in the sixth year of the course.

STEPS. — 1. Teach the method of ruling a journal, and writing dollars and cents in columns.

2. Teach the method of reading dollars and cents orally, so that they may be properly recorded by those who listen.

3. Give practice in footing money columns, and in keeping a cash account.

4. Let the pupils make simple business transactions, such as buying and selling merchandise, paying rent, taxes, etc., and a written statement of every transaction. [Printed “money” and merchandise for these transactions can now be obtained at small expense.]

*Suggestions.* — Accept only neat and systematic work. Give practice in calling off numbers till all can read and record correctly.

In the absence of money and merchandise, the pupils may make their own substitutes. Simple methods of conducting trading are given in the text-books on book-keeping, but the ingenious teacher will be able to originate his own method.

Let the record be an exercise in written composition. Secure accuracy and completeness.

#### *Seventh Year.*

STEPS. — 1. Teach form and use of a simple ledger.

2. Give practice in copying such a ledger.

3. Have the pupils make a ledger from memoranda given by the teacher.

4. Have the pupils record in their ledger the transactions which they make with one another.

*Forms of Ledger Accounts in Books of Charles Norman and Henry Farnsworth, respectively.*

HENRY FARNSWORTH.

1892.			
Jan. 1,	To repairing front door, . . . . .	\$1 25	
2,	By shoeing horse, . . . . .		\$1 35
3,	By mending sled, . . . . .		60
5,	To block for anvil, . . . . .	25	
7,	By repairing sleigh, . . . . .		1 00
10,	To horse to Boston, . . . . .	1 50	

CHARLES NORMAN.

1892.			
Jan. 1,	By repairing front door, . . . . .		\$1 25
2,	To shoeing horse, . . . . .	\$1 35	
3,	To mending sled, . . . . .	60	
5,	By block for anvil, . . . . .		25
7,	To repairing sleigh, . . . . .	1 00	
10,	By horse to Boston, . . . . .		1 50

The pupil will notice that what is debit in Farnsworth's book is credit in Norman's book, and what is debit in Norman's book is credit in Farnsworth's book; yet the same result is exhibited by both accounts, namely, that Farnsworth owes Norman five cents. A similar investigation of a cash account may be useful. The following is an illustration of a cash account:—

	CASH.	DR.	CR.
April 1,	Amount on hand, . . . . .	\$36 25	
	Received for John Smith's note, . . .	90 00	
	Paid Henry P. McDonally, . . . . .		\$35 00
	Paid Charles Osborne for labor, . . .		16 25
	Paid Paul Jones, groceries, . . . . .		17 36
	Received of Daniel Brown on account, .	16 21	

All cash that has been received by the proprietor, including the amount on hand at the beginning of business, is entered on the debit side; all cash that has been paid out is entered on the credit side. The difference between the sums of the two sides shows the amount on hand.

*Closing an Account.* — To ascertain the exact financial relation of the proprietor to a person or thing named in the title of the account, the book-keeper should close the account. By closing an account is meant the process of making it show at a glance the relation between the proprietor and the person or thing named in the account.

The method of closing an account is as follows. The debit money columns and the credit money columns are added separately, and the difference is found between the sums. This difference is then written in the money columns of the smaller side of the account in red ink, and the word "Balance" is written in red in the item column. When this has been done, both columns are added, and their amounts placed beneath them. The footings should be alike, and should always be placed on the same horizontal line. A single red line is then drawn above the footings, and a double red line is drawn below the footings and across the date columns. All ruling is done in red ink. Double red lines indicate that everything above them is balanced.

The difference between the two sides is then placed below the double red lines in the money columns of the larger side in black ink, while the word "Balance" is written in the item column.

It will be noticed that the balance brought down in black ink is always the same as that written above the double red lines in red ink, and is always carried to the opposite side of the account.

The balance brought down shows the financial relation between the person or thing named in the title of the account and the proprietor.

When the cash account on page 43 has been closed it will present the following appearance:—

	CASH.	DR.	CR.
<b>1892.</b>			
Jan. 1,	Amount on hand, . . . . .	\$36 25	
	Received for John Smith's note, . . . .	90 00	
	Paid Henry P. McDonally on account, . .		\$35 00
	Paid Charles Osborne for labor, . . . .		16 25
	Paid Paul Jones for groceries, . . . . .		17 36
	Received of David Brown on account, . .	16 21	
	Balance, . . . . .		73 85
		<u>\$142 46</u>	<u>\$142 46</u>
	Balance, . . . . .	\$73 85	
	Account closed.		

*Suggestions.*—A good text-book is a great assistance, but is not a necessity.

Encourage each pupil to open and keep an account of his own money transactions. Be sure the pupils fully understand the transactions which they are required to record. Let their transactions include notes, drafts, checks and receipts. Require them to take stock frequently and to make statements of their assets and liabilities, and compute their gains and losses.

### *Eighth Year.*

STEPS. — 1. Teach the form and use of the day book.

2. Teach the method of posting from the day book and cash book to the ledger.



3. Teach the proper method of recording all common transactions that include the use of notes, drafts and invoices.

4. Teach the methods that are peculiar to partnership.

*Suggestions.* — Let most of the transactions recorded be those which the pupils have themselves made. Let the pupils take turns in keeping store, but have all make the proper records. Allow them to enter into partnership, and at the close of a period have them divide their gains and losses. Have some of the notes bear interest, and have interest collected. Let the pupils buy and sell notes. The teacher may be banker, and allow the pupils to draw checks which he will cash. Let the pupils learn how the grocers, butchers and storekeepers in the town record their transactions.

*Questions.* — What is an account? What is a ledger, and what is said of its importance? What is meant by the title of an account? What is the left side called? What is the right side called? What is the first horizontal line called? What are the first two columns on each side called? What is the third column called? What are the last two columns called? What two parties to every business transaction? Who is the debtor? Who is the creditor? To what else beside persons are the terms “debtor” and “creditor” applied? When is cash debtor? when creditor? When is merchandise debtor? when creditor? What is true when one keeps an account with one branch of his business? What is the account entitled Charles Norman designed to show? How does it show Mr. Norman’s financial relation to Mr. Farnsworth? Where will Norman’s receipts appear? What will appear in the credit side of the account bearing his name? If Mr. Norman owes Mr. Farnsworth, which side of the account bearing Norman’s name must be the larger? What do you understand by the expression “financial relation”? What contrast do you see between the records in Mr. Farnsworth’s ledger and that in Mr. Norman’s ledger? Do the two accounts show the same or different results? What is the financial relation between the two men as shown by these accounts? What is the rule for writing cash entries? How do you find from the account the amount of cash which should be on hand? If this amount differs from the amount of money actually on hand, what does it show? What is the purpose of closing an account? Give in full the

method of closing an account. What entry shows the financial relation to the proprietor of the person or thing named in the account?

### GEOGRAPHY.

Elementary geography naturally divides itself into four parts; viz., geographical objects, the earth as a whole, continents, countries.

Geographical objects are: hill, valley, spring, brook, river, lake, cape, peninsula, cloud, dew, snow, ice, winds, climate, soil, plants, animals, people, etc.

The purpose of the lessons on geographical objects is to train pupils to observe and to express their knowledge correctly, by talking, writing and drawing, and especially to acquire and to express their knowledge of the facts which they must observe in order to read the globes, maps and books used in the study of the earth as a whole, and of continents and countries.

#### *First and Second Years.*

STEPS. — 1. Teach directions N., S., E., W., and N. E., N. W., S. E., S. W.

2. Teach distance, by measuring short distances in-doors and out-doors, by selecting two well-known objects a mile apart, a half-mile apart, to give ideas of these distances.

Bodies of land: hill, plain, valley, hill-range.

Bodies of water: spring, brook, river, pond, lake.

Projections of land: cape, peninsula, isthmus, island.

Projections of water: bay, sea, strait.

Oral lessons on the seasons, winds, rain, snow, ice, sunrise, sunset, soil (fertile or sterile), meadows, pastures, woodland.

*Suggestions.* — The N. and S. direction may be taught by means of the shadow of an upright stick at noon. A compass may also be used for this purpose. Until the pupil has become familiar with the directions, they may be marked on the floor or by card-board letters hung upon the walls. Pupils should be trained to tell the direction of prominent objects from the school-house and from one another.

The geographical objects which can be seen should be taught by out-door lessons.

Of each group of bodies teach (1) to recognize and name each body when seen; (2) to tell what distinguishes it from other bodies; (3) to tell the relations of bodies to one another, as of hills to valleys, springs to brooks, hills and valleys to brooks, rivers and lakes, peninsulas to bays. The best way to train children to observe these things is to go with them, and show them what to see.

### *Third Year.*

The lessons of the third year should be on home geography.

STEPS. — 1. Lessons to learn and to state the facts.

2. Lessons to represent, by a map, facts that can be so represented.

Most important facts: —

The surface, — level or elevated; the hills, — direction of slopes; the slopes, — steep or gradual.

The streams, — source, bank, branches, mouth, direction and rate of flow, work of streams, wearing, carrying.

The soil, — fertile or sterile; where fertile and where sterile.

Ponds, lakes, bays or oceans, — the shore projections and indentations; islands.

The weather, — what winds bring heat, cold, rain, snow, wet, dry.

Plants and animals of the town, those good for food, shelter or clothing; occupations and industries of the town.

Roads, railroads, use of.

Different villages in the town and reasons for location.

NOTE. — As the pupils learn these facts, teach them to construct maps representing, —

1. Plan of school-room, on paper or black-board, with location of principal objects.

2. Plan of school yard with school-house.

3. Map of neighborhood, with roads and principal buildings.

4. Map of the town, representing position and direction of natural features. Teach pupils to draw such maps in the time of recitation, and to recite as they draw.

*Suggestions.* — The names of things studied should be taught, but definitions at this stage of the work should not be required.

Pupils may be taught to describe geographical objects also by moulding in sand or clay.

*Fourth and Fifth Years.*

The study of geography proper should begin with the fourth year in school.

STEPS. — 1. Present the earth as a whole, by the use of a terrestrial globe.

Teach surface, land and water; rotation of the earth, time of rotation; axis, poles, equator; hemispheres, eastern and western; oceans and continents, name and place in hemispheres; hot, cold and temperate parts; principal productions, animal and vegetable, of hot, cold and temperate regions; races of men.

2. Teach each continent separately, by the use of a map; its form, relative size, relative position; external waters, principal peninsulas, capes and islands; principal mountains and rivers; productions, races of men; countries, great cities.

Oral lessons on states of society, governments and religions.

*Suggestions.* — Precede the study of the earth as a whole by conversations designed to lead the pupils to tell what they have seen or heard of the world outside of the town in which they live.

Teach pupils to observe and collect the natural productions of the town, to visit the manufactories, observe the processes. Collect the products, to find what is done with these products, what products are brought in and from what places. Let these products be arranged and preserved in the cabinets.

*Sixth and Seventh Years.*

Continents: North America, South America, Asia, Europe, Africa, Australia.

A continent as a whole: —

Position on the earth.

In what hemispheres.

In what regions.

Relative position.

Form.

General form.

Projections of land.

Islands.

Projections of water.

Extent and area.

Relief.

Primary highlands.

Position. Plateau. Slopes. Systems. Peaks. Valleys.

Profiles.

Secondary highlands.

Drainage.

Great water-sheds.

Great basins.

Great river systems.

Climate.

Temperature. Moisture.

Soil.

Very fertile. Fertile. Arable. Barren regions.

Productions and productive regions.

Minerals. Forests. Food plants. Fiber plants.

People.

Races. Occupations. Settlements. Commerce.

Political divisions.

Position in the continent.

Relative extent.

Relief.

Highlands, — portion included. Relative position. Relative extent.

Lowlands, — portion included. Relative position. Relative extent.

Drainage. Portion of continental drainage included.

Climate. General conditions.

Soil. Degree of fertility

Productions.

Relation to productions of continent.

Important peculiar productions.

People.

Principal race.

Chief occupations.

Commerce.

Important cities.

Government, — kind. Capital.

Religion.

State of society of the people.



*Eighth and Ninth Years.*

Important countries : United States, British America, Brazil, European countries, India, China, Egypt.

Study of an important country : —

Position in the continent.

In what regions.

Relative position.

Form.

General form.

Projections of land included.

Islands included.

Projections of water included.

Extent and area.

Relief.

Primary highlands, — portion included.

Position in the country.

Peculiarities of part of elevated mass within the country.

Peculiarities of included slope.

Prominent ranges.

Prominent peaks.

Noted valleys.

Secondary highlands.

[As for primary highlands.]

Lowlands, — portions included.

Position in the country.

Relative extent.

Drainage.

Great water-sheds included.

Great basins included.

Great river systems included.

Peculiar river systems of the country.

Climate.

Temperature. Peculiar to the country. Comparative.

Moisture. Peculiar to the country. Comparative amount.

Soil.

Kinds of soil.

Fertility, — general degree. Fertility of special places.

Productions.

Minerals. Peculiar to the country.

Plants. Peculiar to the country.

Animals. Peculiar to the country.

People.

Principal races in the country.

Prominent occupations. Commerce.

Settlements.

Villages and towns. Relative number.

Cities. Relative number.

Reasons for location; for growth or decay.

Means of communication.

Government.

Kind. Capital. Ruling family.

Religion.

State of society of the people.

Political divisions.

Study of a State:—

The topics for the study of a country can be modified for the study of the State. The relation of the country to the State, of the town or city to the country and State, should be noticed with some detail.

## HISTORY.

Work in history should be done with each of the three sections into which the school is divided for the study of physiology. See page 55.

### *Section I.*

Use the language exercises and those in home geography to awaken an interest in historical subjects and to prepare the way for more formal study.

Describe historical events, and relate striking incidents in the life of famous persons. Select especially examples of heroism and self-sacrifice for their country or for their fellow-men.

Use public anniversaries, as the Fourth of July and Washington's Birthday, to give historical information.

Require all stories to be retold either orally or in writing. Have it understood that the work is not for entertainment, but for instruction.

In connection with the study of home geography, refer to

the early history of the town, the first settlers, who they were, why they came, in what part of the town they lived, how they lived, their houses, schools, industries, their neighbors the Indians, interesting historical events and local traditions.

As far as possible illustrate these facts by pictures and such relics of the past as the neighborhood may afford.

### *Section II.*

Read through and review a small outline history of the United States as supplementary to the third and fourth readers.

Question the pupils upon these as upon other reading lessons. Train to search for information and to arrange it by the use of topics and questions. For example, — Spanish explorers. Who? what? when? First settlements in the colonies, where? when? by whom? why?

Colonial life: houses, furniture, food, dress, travel, schools, churches, servants and slaves, customs; compare with present time, to give idea of history as a growth. Indian wars: names, character, habits of Indians. Revolution: list of prominent events; What was done? Why? What result? Stories of the war, bringing out characteristics of the people. The first president and his times. Invention of cotton gin and steamboat. Stories of war of 1812. Slavery troubles, stories of civil war. Have the facts grouped under these heads. Encourage reading of interesting books of travel and history.

The facts thus arranged may be put into sentences, oral and written, and thus be used in language training.

Make lists of famous men, and have pupils gather as much information concerning them as possible. Have this written.

### *Section III.*

Begin the formal study of history with the first section as one class. Use a fuller text-book than that used for reading by section II.

Assign lessons by topics, and not by pages in the book. Do not allow the words of the book to be memorized.

Require pupils to illustrate the progress of discovery and

settlement by maps of their own making. Use maps also to trace the progress of military campaigns.

Describe but few battles in detail, among these Quebec, Bunker Hill, Saratoga and Yorktown. Draw plans to show position and movement of troops. Make biography prominent.

Require but few dates to be memorized.

Impress upon the pupils that the study of history is the study of the *growth* of the country and the *causes* of that growth.

Teach pupils how to prepare lessons from a series of questions; *e.g.*, Northmen: 1. Who came? What did they discover? When? 2. Why did they come? 3. What were the results of the discoveries? Direct them in the use of supplementary books.

Study explorations by nationalities; *e.g.*, Who came? What was discovered? Which part of the century? What were the different motives? What were the results? Connect very closely geography and history. Bring out the conditions of the times which led to these discoveries. Study a few typical explorers carefully. Accompany written work with maps and pictures.

Make a general study of settlements first, what people came, why they came, in what part of the century, spread of settlements.

Teachers will find topical outlines in the best text-books. The following schemes may be found useful in the study of a war, and of a single campaign, as Braddock's or Burgoyne's.

Plan for study of a war:—

1. Parties; 2. Cause; 3. Occasion; 4. Elements of strength and weakness on each side; 5. The campaigns; 6. The result; 7. The consequences.

Plan for study of a campaign:—

1. Plan:—

- a.* Objective point, what? why?
- b.* Route, what? why?
- c.* Forces and commanders.
- d.* Advantages and difficulties.

2. Movements; 3. Decisive battle; 4. Result; 5. Consequences.

Make a detailed study of a few typical settlements; *e.g.*,

Pilgrim, Puritan, Dutch, Quaker, Virginian. What classes of people came, the time of first settlement, the mode of living, the government, famous men. Bring out the special characteristics of each, by vivid pictures of colonial life. Use many books, pictures, documents, such as the compact, charters and old records, houses and relics in the town. Review by showing the growth in the colonial period in population, extent of settlement, industries, education, changes in government. Make a comparative summary of the settlements.

Teach pupils to prepare a lesson according to this plan, to recite from outline maps, to think about the plan of the war, to find stories illustrating characteristics of the leaders. Accompany written work with maps and plans.

The administrations may be studied in groups: 1. The establishment of the new government, 1789-1817. 2. The period of discussion of political and business questions, 1817-53. 3. The period of contest over slavery question, 1853-76. In each period the facts may be grouped under these topics: list of presidents; political issues; business matters; internal improvements; foreign matters; extension of territory. Be careful to show the connection of events from one administration to another; illustrate by diagrams political changes; explain special terms that are used, *e.g.*, tariff, national bank, nullification. Fix the essentials. Supply supplementary reading, to keep the pupils interested in the events connecting history and literature. Make progressive maps, and fill in the details.

It is suggested that in the final review the events be grouped under a few topics, as in the following outlines:—

1. How America became known to Europeans? Northmen? Spaniards? Dutch? English?

2. The English settlers, —

In New England, in middle colonies, in southern colonies, who they were, why they came, how they lived.

3. The French in North America, —

Territory acquired, what and how, loss of territory.

4. The Revolution, —

Taxation, resistance, Declaration of Independence, the war, State constitutions, the Confederation, the Constitution.



## 5. Extension of territory and settlement, —

Settlement of Kentucky and Tennessee, settlement of the North-west, the Louisiana purchase, the Florida purchase, settlements west of the Mississippi, annexation of Texas, Mexican war, settlement of Pacific coast, settlement of the south-west.

## 6. Slavery, —

Introduction, extent, beginning of opposition, abolition in the North, agitation in Congress, Missouri compromise, fugitive slave law, Kansas-Nebraska act, formation of political parties, secession, civil war, extinction of slavery, reconstruction.

## 7. The Indian tribes, —

Location at time of European settlement, habits and character, relation to English settlers, treatment by United States government.

## 8. Useful discoveries and inventions.

## 9. Growth of industries.

## 10. Changes in the life of the people.

During the seventh, eighth and ninth years, simple lessons should be given in *civil government*: 1. The facts of local, State and national government; (*a*) what officers chosen, (*b*) by whom chosen, (*c*) when chosen, (*d*) how chosen, (*e*) for what chosen. Use the time of elections for such lessons, collecting sample ballots, town reports, posters after their use, records of meetings. 2. The principles of government, derived from concrete cases, local, State and national. Any good book on civil government will suggest these. Use town affairs and documents, visits to the State capitol, reports of legislature and of courts, discussions of public questions, newspaper clippings. Arrange debates on non-partisan questions. Teach pupils how to organize and handle a public meeting, keep the records, prepare and cast ballots, count ballots and make reports.

## PHYSIOLOGY AND HYGIENE.

For convenience in teaching physiology and hygiene the school may be divided into three sections: the first section comprising the classes on the first two years' work; the second

comprising the next three classes; and the third comprising all above these.

*Section I.*

STEPS. — The work of the first section should be oral, and the following order is suggested : —

The whole body : —

*Position.* — Teach the pupils to observe their own and others' positions while sitting, standing, and walking. Teach them to desire and to strive to be erect. The lessons on height and weight should be to this end.

*Height.* — Each pupil should know his height. Mark the height of a pupil on an unused black-board or door jamb; record the date, the height and the weight beside the mark. Do the same for three or four pupils. Repeat the measurements at regular intervals. Encourage other children to have the same done at home by their parents or older children. Have children compare their growth during different intervals. All the lessons should tend to producing and retaining correct posture and carriage.

*Weight.* — Do same as for height. The practice of measuring height and weight should be continued through the period of growth.

The external parts of the body : —

Pupils should touch and name the parts in regular and irregular order.

*Principal Parts.* — Head, neck, trunk, upper limbs or arms, lower limbs or legs; right and left.

*Parts of the Head.* — Crown, back, sides, hair, ears, face; parts of the face, — forehead, temples, cheek, chin, eyes, brows, lids, lashes, nose, nostrils, bridge of the nose, mouth, lips.

*Parts of the Neck.* — Throat, nape, sides.

*Parts of the Trunk.* — Chest, — breast, back, shoulders, sides; abdomen, — waist, hips, sides.

*Parts of the Arm.* — Upper-arm, elbow, forearm, wrist, hand; parts of the hand, — back, palm, thumb, fingers, knuckles, nails.

*Parts of the Leg.* — Thigh, knee, shin, calf, ankle, foot; parts of the foot, — instep, arch, heel, ball, toes, nails.

*Uses of Parts.* — Children should observe the direction and

degree of the motion of the head and neck, trunk, arm, hand, fingers, leg and foot, and the principal use of each part.

*Care of Parts.* — Each child should be taught to take proper care of his hair, eyes, nose, mouth, teeth, hands, feet and nails. Cleanliness of parts of the body and of the clothing should be insisted upon daily before the school exercises are begun.

*Stimulants and Narcotics.* — Stories which have a simple moral point well illustrated are adapted to the youngest children.

Bring into the written vocabulary of this year the new words incident to this work. Introduce the thoughts into reading and language lessons.

The senses : —

Teach by simple experiments what each sense is, its prominent (structurally) and delicate (in sensitivity) parts, the use of the important parts, the knowledge gained by each alone, and the care of each sense. Avoid in experiments all sources of error, such as learning through touch what ought to be known by hearing.

*The Sense of Touch, — the Skin.* — Teach that we touch with the skin on any part of the body, but most delicately with the tips of the fingers, the lips and the tongue. Teach that through touching we learn the shapes of objects, whether they are hard or soft, rough or smooth. Show that calluses and dirt diminish the delicacy of touch.

*The Sense of Sight, — the Eyes.* — Teach pupils to discover in their own eyes and in the eyes of others the ball, the white, the iris, the pupil ; to name, draw and describe each colored part ; to find how the iris adapts itself to the amount of light. Teach the use of the lids, lashes, brows, tears, winking, motions of the eyes. Teach what we learn with our eyes ; the care of the eyes. Give color lessons and others requiring sharp observation.

*The Sense of Hearing, — the Ears.* — Teach that we hear with our inner ears ; that the outer ear collects the sound, the canal conveys the sound to the inner ear. Teach what is learned by the ears ; the care of the ears. Give sound lessons.

*The Sense of Taste, — the Tongue.* — Teach that we taste with the tongue, and that by pressing the tongue against the

soft palate we taste more delicately. Teach that by tasting we learn the flavors of food and the wholesomeness of food. Emphasize the fact that the pleasure derived from the relish of food often leads to over-eating and gluttony; that the more important use of tasting is to find out whether the food is wholesome or not. Teach pupils the need of cleansing the mouth and teeth after each meal. Call attention to the effect which burning the tongue has on the sense of taste. Show how hot food and drinks, pepper, mustard, spices, tobacco and alcohol diminish the delicacy of taste. Teach flavors, bitter, sweet, saline, acid.

*The Sense of Smell, — the Nose.* — Teach that we smell most delicately with the upper part of the nose. Teach that by smelling we learn the odors of objects, — pungent, fragrant, spicy, and to determine the wholesomeness of food and purity of air. Emphasize the fact that the pleasure (relish) derived from the odors often leads to over-indulgence; that the more important use is in finding out the wholesomeness of food and purity of air. Teach the care of the nose; the effect of colds on the sense of smell.

*Suggestions.* — Teach in such a manner as to lead pupils to value their senses and to take good care of them. Give lessons to increase the power of the senses. Tell how acute the senses may become, as in the Indian. Speak of the unfortunate people who are deprived of sight and hearing, awaken sympathy for them, and teach the duty of assisting them cheerfully and willingly at all times.

## Section II.

The limbs and walls (third year) : —

Skin, muscle, tendon, blood, blood-vessels, nerves, fat, bones, joints, ligaments, cartilage.

*Sources of Knowledge.* — The body. At home, — fur; raw and cooked beef; leg of a fowl, veal, lamb. At the market, — sides and cuts of beef; mutton and pork; bones. At school, — shank of beef; bones; pictures; diagrams; books.

*What to Teach.* — The organ: distinguish, name; position, prominent qualities; use, care; effects of alcohol and tobacco.

*Method.* — 1. Find what is known. 2. Teach pupils to observe the organ; to observe its uses; to learn its care from

experiences, home training, from knowledge of use, from reading. 3. Contribution of facts. Selection and arrangement of the facts by pupils. 4. Oral and written descriptions, drawings with and without the objects, according to an outline. 5. Reading of selected articles.

*Suggestions.*—Observations of corresponding parts of other animals. Teach to put a piece of sticking plaster on a wound; to cleanse and bandage a cut; to assist one who is weak.

The internal organs (fourth year):—

Tongue, teeth, pharynx, etc.

*Sources of Knowledge.*—The body. At home,—beef tongue; internal organs of a fowl, of a pig; harslet; kidneys. At school,—teeth procured from a dentist; harslet of a calf or pig (possibly some of the digestive organs of a pig); pictures, etc.

*What to Teach: Method.*—See limbs and walls.

*Suggestions.*—*Locate* each organ by placing the hand over it. *Group* organs into systems by tracing the passage of food, the flow of blood, the flow of air, etc. *Emphasize* uses and care of special organs. Teach to locate large arteries and veins; to find the pulse and count the beats; to stop bleeding from an artery or vein.

The needs of the body (fifth year):—

Food, air, clothing, removal of wastes, exercise, rest.

*Sources of Knowledge.*—Experience, observation of others, home teaching, books.

*What to Teach.*—Food,—needed for growth, repair, heat, strength; quality, quantity, manner of taking. Is alcohol a food?

Air,—needed for the slow burning by which growth, repair, heat and strength are produced; why we breathe; how we should breathe; pure and impure air; effects of breathing impure air.

Clothing,—needed for warmth and protection; amount of clothing; how clothing should be worn.

Removal of wastes,—the wastes; how removed; effects of not removing the wastes; cleansing the skin; cleansing the clothing.

Exercise,—needed to secure health, strength and skill; kind; time; amount.



Rest, — needed for the growth and repair of the body, and for the renewal and increase of strength of body and mind; kind; time; amount.

*Method.* — Topic proposed. Illustrations gathered by pupils, added by teacher. Perceived effects stated, compared with needs, conclusions drawn. Presentation of topic in full by the pupil. Reading of selected articles.

*Suggestions.* — Teach to treat a burn or scald, a frostbite. Review preceding emergency cases. It is not intended that the pupils shall be taught in these lessons *how* food, air, exercise and sleep build up the body, but only the fact that they do so build. Abundant illustrations should be used to impress the points.

### *Section III.*

The systems:—

Nutritive systems, — digestive, circulatory, respiratory. Motory, — bony, muscular. Nervous systems.

*Sources of Knowledge.* — See previous topics.

*What to Teach.* — 1. The principal organs composing the system; the name, and the place of each in the body, and their connection with one another. 2. The work of each system, and the part each organ performs in this work. 3. The connection of the systems with one another. 4. The effect of stimulants and narcotics upon the work of each.

*Method.* — See previous topics.

*Suggestions.* — Give special attention to the following points, and to interdependence of vital processes. Use text-books in higher grades, — especially in reviews.

Digestive system, — course of food to blood-vessels. Care of teeth, mastication, time for digestion, removal of waste matter.

Circulatory system, — course of blood from left ventricle back to it. Location of arteries, veins, pulse. Evil effects of compression. Treatment of cuts, bruises, bleeding, fainting.

Respiratory system, — course of the air. Nose breathing, deep breathing, evil effects of compression. Effects of breathing impure air, of colds. Treatment of persons rescued from drowning, and of those who have swallowed poisons.

Bony system, — growth of bones. Harmony of structure and function. Deformities; how avoided; cured.

Muscular system, — attachment and arrangement of muscles. Blood supply. Principles in training.

Nervous system, — divisions of the nervous system. Uses of nerve centres and nerve fibres. Sleep the best form of rest. Dependence of the health of the nervous system on the health of the organs of the chest and abdomen. Necessity of sunlight and pure air.

The skin, — uses of. Bathing, clothing, injuries.

## INDUSTRIAL DRAWING.

*First Year. (Plate I.)*

The lessons for the first three years may be arranged under three heads: Form, Color and Arrangement.

FORM. — Teach each form as a *whole* from type solids and objects, in this order: —

1. Sphere (1), and similar forms (a, b, c, d, e).
2. Cylinder (2), and similar forms (a, b, c, d).
3. Cube (3), and similar forms (a, b, c).

Mold these in clay.

Teach *parts* of these forms: —

1. Surface, — curved, plane.
2. Face, — curved, plane; shapes of plane faces, — round, square; and positions of these, — horizontal, vertical, oblique.
3. Edge, — curved, straight; positions of straight edges, — horizontal, vertical, oblique.
4. Corner; positions of corners, — upper, lower, left, right, upper and lower left, upper and lower right; distances, one inch, two inches.

Place *points* to indicate these.

During this work in Form, drill pupils to good position of body, pencil and paper, and practise the movements — horizontal, vertical, oblique — preparatory to drawing.

Draw *lines* from dictation, for practice, on black-board and manila paper. Encourage sketching of objects, in connection with other studies.

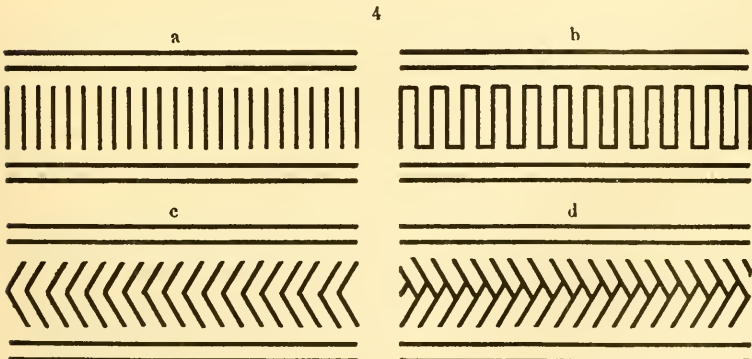
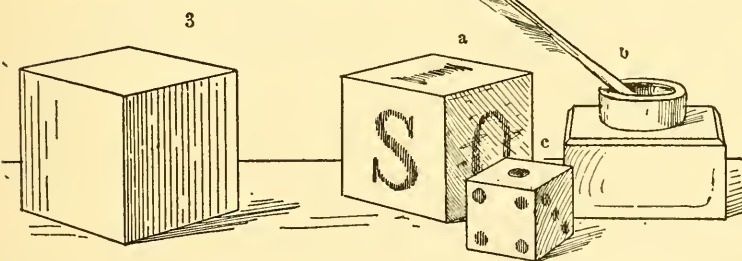
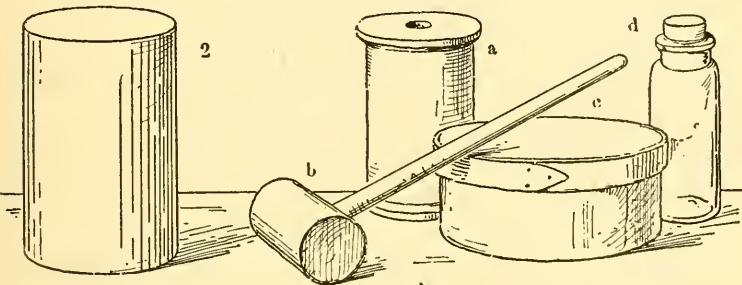
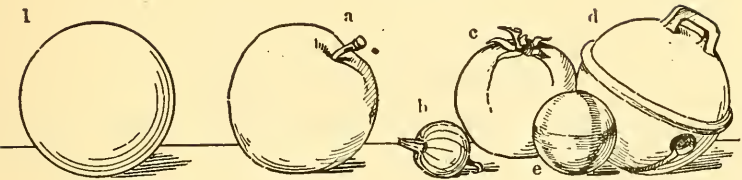
COLOR. — Teach *the spectrum* as a whole, produced upon the wall by means of a glass prism. Teach its *parts*, — red, orange, yellow, green, blue, violet. Compare these with colored objects. Teach black, white and gray. Use color in Arrangement.

ARRANGEMENT. — Teach *repetition*, using colored sticks. First copy some historic frets\* (See Fig. 4, a, b, c, d), then make original arrangements. These may be preserved by gluing the units to a background of paper. In each, use but one color on a black, white or gray ground.

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\* a, c and d, from Egyptian costumes; b, from a Greek vase

PLATE I.



*Second Year. (Plate II.)*

FORM. — Divide the type solids, and study the new forms thus produced, each as a new whole.

1. Hemisphere (1), and similar forms (a, b).
2. Half-cylinder (2), and similar forms (a, b).
3. Half-cube (3), and similar forms (a, b).

Mold these in clay. Teach also prisms (5 and 6) and plinths (4 and 7), by further dividing type solids of clay.

Teach *parts* of these forms, reviewing surface, face (two new shapes — rectangular, triangular), edge (relations — parallel, at an angle) and corner. Teach angles, — right, acute, obtuse. Practise measuring with ruler.

During this work in Form, drill pupils to good position of body, pencil and paper, and practise the movements — horizontal, vertical, oblique, circular — preparatory to drawing.

Draw *Geometric Figures*, from the solids, from dictation, from memory: Triangle (8), Square (9), and Rectangle (10). Cut these from paper and use them to teach such terms as base, apex, altitude, diameter, diagonal.

Make freehand geometric drawings from objects based on these figures: *e. g.*, pennant (a), bracket (b), paper cap (c); signal flag (a), cross (b), sash (c); tag (a), envelope (b), door (c).

COLOR. — Review the spectrum. Fix the six standard colors (red, orange, yellow, green, blue, violet) so that they shall never be mistaken. This may be done by comparing them with other hues. Use in Arrangement.

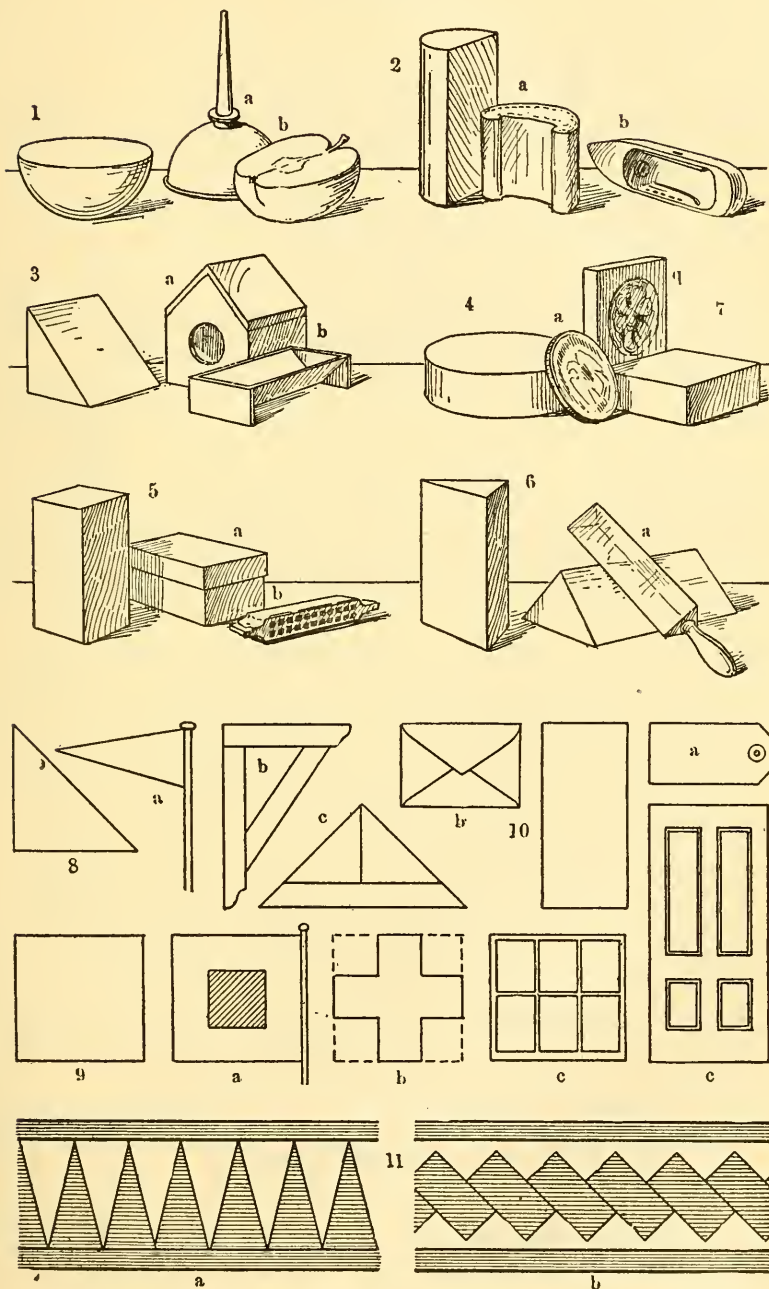
ARRANGEMENT. — Review repetition and teach *alternation* in borders, and apply to surfaces, using triangles, squares and oblongs cut from colored paper. First copy one historic border\* (See Fig. 11, a, b), then make original arrangements. Construct one of these by gluing units of one color upon an appropriate gray background. Add margin lines.

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\* a, b, Egyptian borders, taken from the tombs at Thebes.



## PLATE II.



*Third Year. (Plate III.)*

FORM. — Teach those forms which may be derived from the type solids by variation.

1. Spheroids, — flat, long; — Ovoid (1), and similar forms (a, b, c).
2. Cone (2), and similar forms (a, b, c, d, e).
3. Pyramid (3), and similar forms (a, b, c, d).

Mold these in clay. By dividing solids of clay obtain new shapes of faces, — elliptical, oval. Review other shapes of faces, especially circular.

During this work in Form continue practice in measuring and judging distances, in the movements, — circular, elliptical, oval, — and teach the use of an eraser.

Draw *Geometric Figures*, from the solids, from dictation, from memory: Circle (4), Ellipse (5), and Oval (6). Cut these from paper, and use them to teach such terms as circumference, diameter, — long, short, — radius, arc, centre, focus, axis.

Make freehand geometric drawings from objects based on these figures: *e.g.*, target (a), circular window (b), reading glass (c); hand mirror (a), eye glasses (b), capital Q (c); horseshoe (a), padlock (b), fan (c), spoon (d).

COLOR. — Review the spectrum standards, and teach *hues*: violet-red, orange-red, red-orange, yellow-orange, orange-yellow, green-yellow, yellow-green, blue-green, green-blue, violet-blue, blue-violet, and red-violet. Teach the order in which all these colors occur in the spectrum. Use in Arrangement.

ARRANGEMENT. — Review repetition and alternation in borders and surfaces, and apply to centres. Teach *symmetry*, using as units geometric figures cut from colored paper. First copy one historic border\* (Fig. 7, a), then make original units, combining geometric figures symmetrically (Fig. 8). Make an original centre with these (b, c). Construct this by gluing units of one color upon an appropriate passive background. Add margin lines.

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\* a, an Egyptian border from a mummy case.

## PLATE III.



~~33~~ The lessons for the following years may be arranged under three heads: *Geometric Drawing*, representing facts of form and structure, — to be accurate, with ruler and compass; *Decorative Drawing*, representing enrichment of objects, ornamental forms, or material to be used in decorative design, — to be either mechanical or freehand, as convenient; *Pictorial Drawing*, representing objects as they appear from one point of view, — to be freehand, always.

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#### *Fourth Year. (Plate IV.)*

GEOMETRIC DRAWING. — Teach the representation of curved surfaces. Make accurate working drawings of a sphere (1), a spheroid (2 or 3), an ovoid (4); then of objects similar in form: *e.g.*, a weight (5), dumb-bell (6), a door knob (7), mending ball (8), or any other simple object illustrating the principle. Full lines represent visible outlines; dotted lines represent connecting or guide lines.

DECORATIVE DRAWING. — Teach *modification of regular geometric units*, like the square and circle. Cut the geometric unit from paper, and modify by cutting to produce a pleasing decorative form. (See 8, 9, 10 and 11.) Copy one historic example\* (12 or 13), either by drawing or by constructing with colored paper; then make a border or a surface pattern with original modified units. Construct, using colored paper to illustrate Dominant Harmony; that is, use a tint the keytone and a shade of one color.

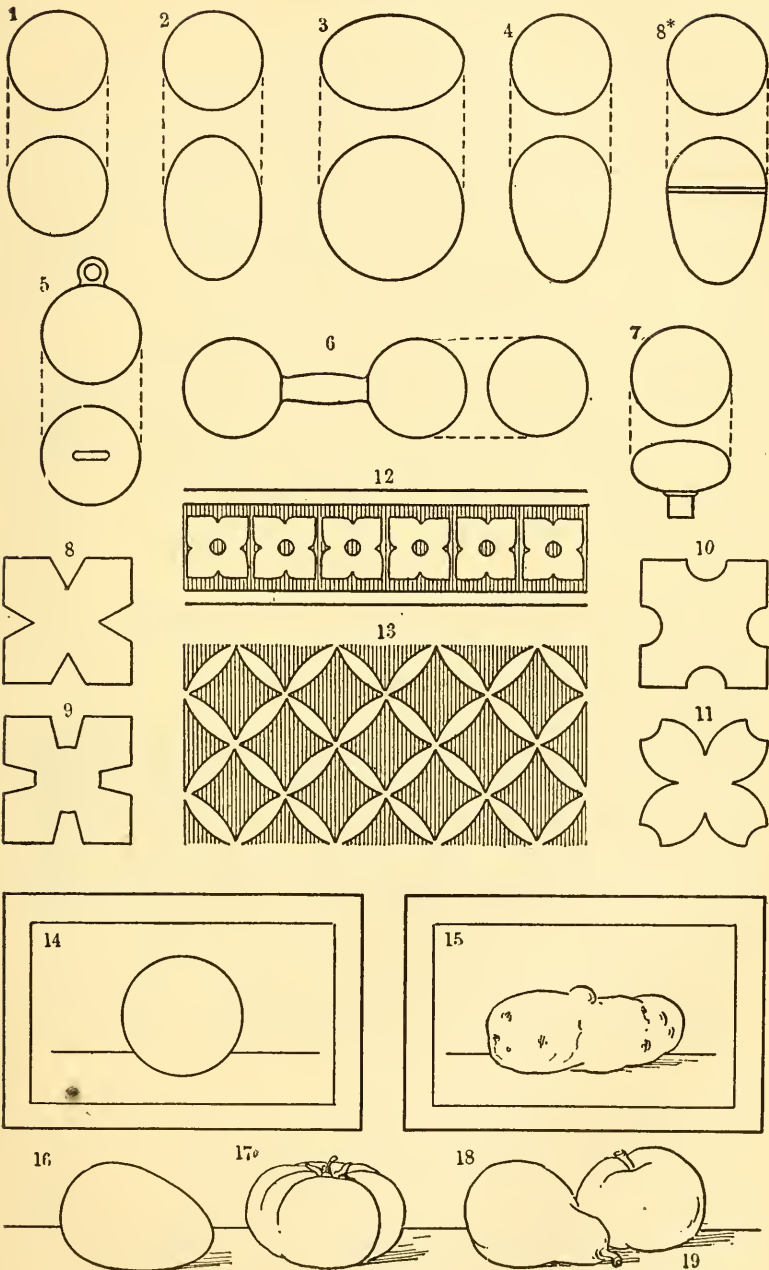
PICTORIAL DRAWING. — Teach the use of a wire to cover edges, touch corners, etc. Study the effect of distance and level upon objects. Teach the *Representation of Solidity* (that is, teach how to indicate the three dimensions of solids on one plane surface). Make a freehand drawing of a sphere standing on a plane surface (Fig. 14). Indicate the highest point on the solid, and represent it in the drawing. Draw similar forms: *e.g.*, a potato (15), ovoid (16), tomato (17), pear (18), apple (19), etc. In each case represent the back edge of the plane on which the object rests.

Each pupil should be supplied with an object; each should draw his own object, just as it appears from his point of view. The order to be observed in drawing any object is: 1, indicate whole width and height; 2, sketch mass; 3, sketch principal parts; 4, sketch details; 5, correct if necessary; 6, erase all lines except those to appear in the finished drawing; 7, line-in, — that is, finish the drawing with lines which shall express, so far as possible, the character of the object.

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\* 12, a Gothic border from a window, St. Thomas at Strasburg; 13, an Egyptian surface, from a mummy case

PLATE IV.





*Fifth Year. (Plate V.)*

GEOMETRIC DRAWING. — Teach the representation of *curved and plane faces*, make accurate working drawings of a hemisphere (1), and of objects similar in form: *e.g.*, a bowl (2), inkstand (3), oil feed (4). Make accurate working drawings of a cylinder (5), and of cylindrical objects: *e.g.*, a pill box (6), spool (7), mug (8), etc. Full lines represent visible outlines and visible edges. Dot-and-dash lines represent axes of objects.

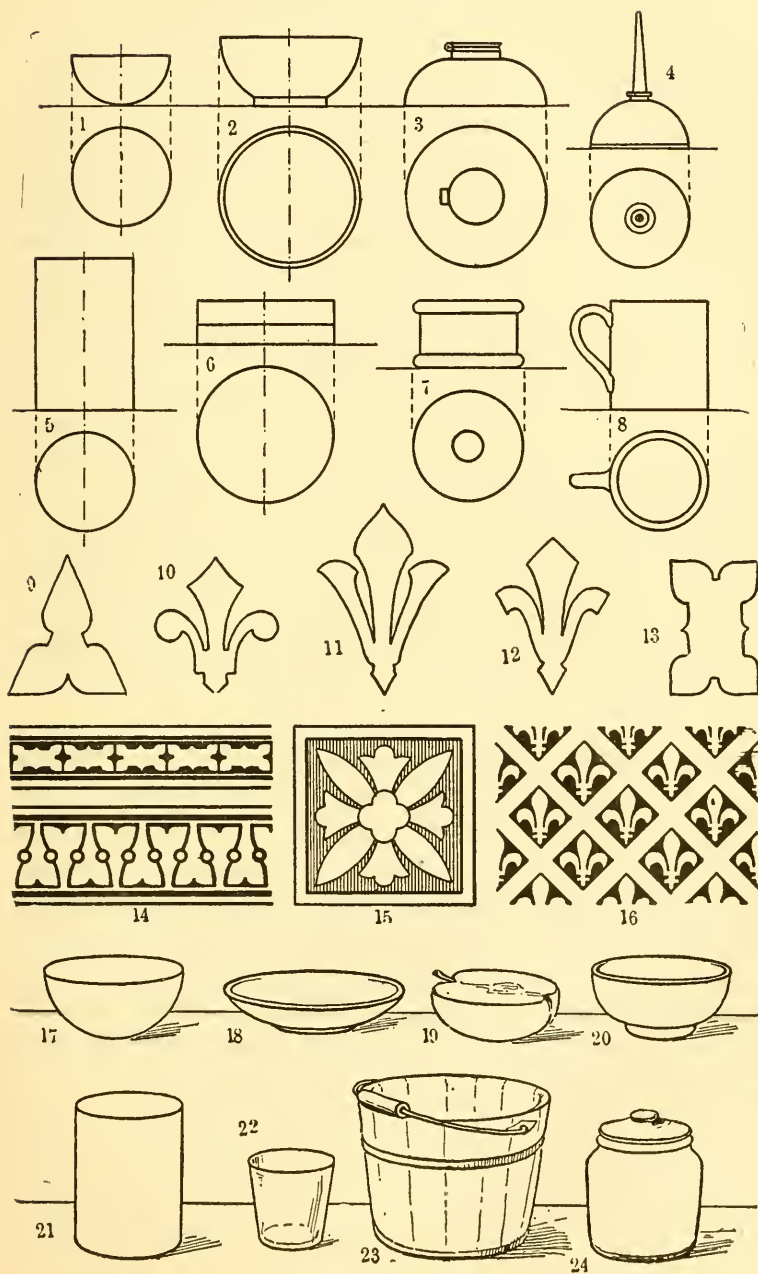
DECORATIVE DRAWING. — Teach *modification of bilateral units*, like the triangle, oblong and kite. Cut the unit from paper, and modify by cutting to produce a pleasing decorative form. (Figs. 9, 10, 11, 12 and 13.) Copy one historic example\* (15 or 16) either by drawing, or by constructing with colored paper; then make a border (14), a centre or a surface pattern with original modified units. Construct, using colored paper to illustrate Dominant Harmony.

PICTORIAL DRAWING. — Teach the use of a pencil to obtain proportional measurements. Study the effects of foreshortening upon horizontal surfaces. Teach the representation of *Foreshortening*, as seen in a hemisphere (17). Make freehand drawings of objects similar in form: *e.g.*, a saucer (18), half-apple (19), or bowl (20). Lead pupils to discover the effects produced by a given surface at different levels. Use a cylinder. Make freehand drawings of a cylinder (21), and of cylindrical objects: *e.g.*, a glass (22), a pail (23), a stone jar (24), etc. Let the more advanced pupils draw a simple group, — an apple in a saucer, or a cup of tea, or any other group involving only the representation of spherical, hemispherical and cylindrical objects.

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\* 15 from a Byzantine illuminated manuscript; 16, from a Gothic encaustic tile.

## PLATE V.



*Sixth Year. (Plate VI.)*

GEOMETRIC DRAWING. — Teach the representation of *invisible parts*. Review working drawing of the cylinder. Make accurate working drawings of objects having the form of a hollow cylinder: *e. g.*, an ink well (1), a spool (2), or the clay-jar (3). Teach the representation of *plane faces oblique in one view*. Make accurate working drawings of a half-cylinder with its oblong face directly in front (4), and turned at an angle (5); of a cube with one face directly in front (6), and turned at an angle (7); of a hexagonal crayon, (8). Dashed lines represent invisible outlines or invisible edges.

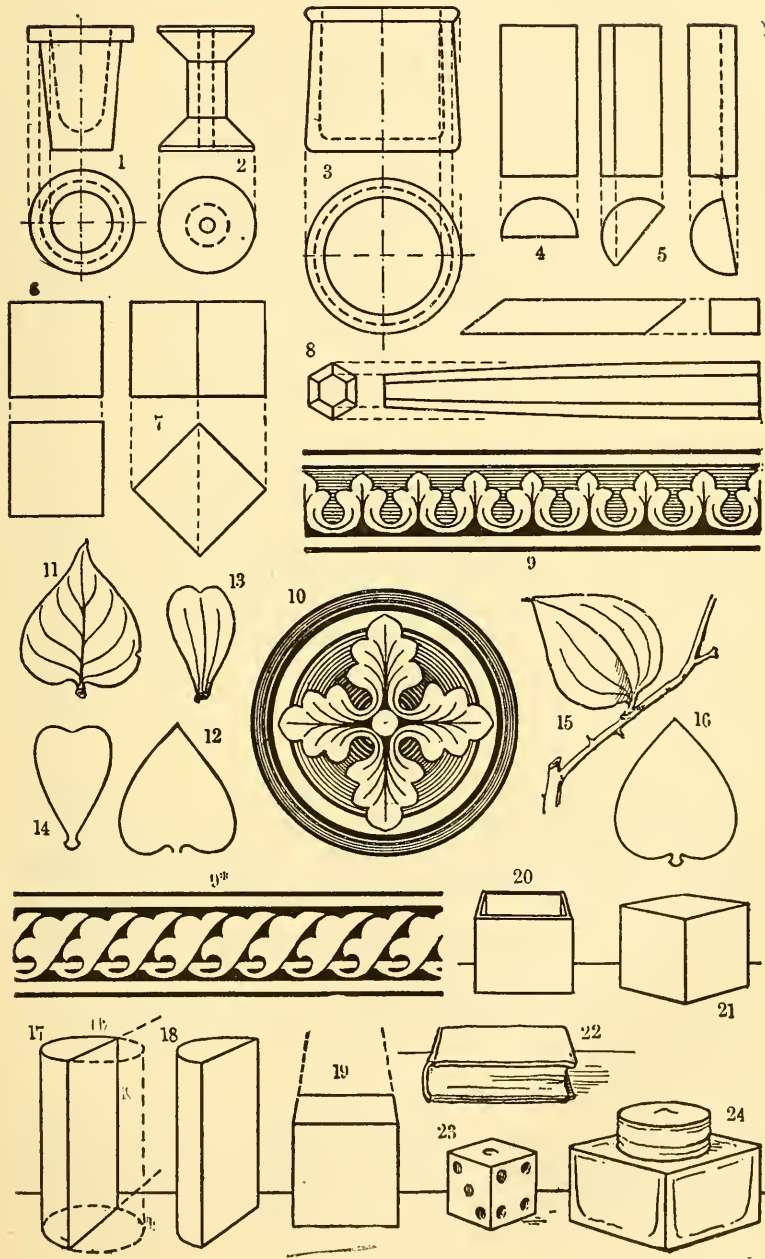
DECORATIVE DRAWING. — Teach *Conventionalization of Leaves*. Copy a historic example\* of a border (9, or 9\*) or a centre (10). Compare these leaves with the natural leaves which they suggest. Note changes. Draw two entire margined leaves: *e. g.*, a lilac (11), wild indigo (13), cat-briar (15). Conventionalize these (12, 14, 16). Make an original design for a border or centre, using conventional leaves as units. Construct, using colored paper to illustrate Complementary Harmony; that is, make leaves of one color, centre or margin, or both, of its complementary, on a background of gray, black or white.

PICTORIAL DRAWING. — Teach *Convergence*. Review effects of distance and level. Make freehand drawings of a cube with one face directly in front of and a little below the eye (19), and of objects similar in form: *e. g.*, a chalk box (20), or a book (22). Review the cylinder and draw it. Cut through the axis as indicated (17). Erase right half of cylinder, leaving half-cylinder (18). Notice convergence. Study a cube turned at an angle of  $45^{\circ}$  and draw it (21). Draw similar objects: *e. g.*, a die (23), an inkstand (24).

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\* From Gothic stained-glass windows; 9, 10, cathedral at Bourges; 9\*, from cathedral at Soissons.

PLATE VI.



*Seventh Year. (Plate VII.)*

GEOMETRIC DRAWING.—Teach the representation of *Three Views*; and *Drawing to Scale*,—half size, quarter size,—marking dimensions. Make accurate working drawings of a square plinth (1), a circular plinth (2), of a square prism and of objects similar in form: *e.g.*, a chalk box (3), or dictionary (4). Teach the representation of *plane faces oblique in two views*. Make accurate working drawings of a half-cube or triangular prism (5), and of some object similar in form: *e.g.*, a desk body (6) or a bird house (7). Very light full lines with arrow points are used to indicate the direction and extent of dimensions.

DECORATIVE DRAWING.—Review *Conventionalization of Leaves*, and apply to serrated, lobed and compound leaves. Copy a historic example\* of a panel (8), a centre (9, 10), or a border (11). Compare these leaves with the natural leaves which they suggest. Note changes. Draw a serrated leaf, a lobed leaf and a compound leaf: *e.g.*, a maple (a), birch (b), tear thumb (c), and cinquefoil (d). Conventionalize these (a, b, c, d). Make an original design for a centre, using conventional leaves as units, or for a panel, using the leaves on bilateral main lines. Construct, using colored paper to illustrate Analogous Harmony; that is, use related tones of color, like green-yellow tint, yellow and orange-yellow shade.

PICTORIAL DRAWING.—Review *Convergence*, and draw such objects as a square prism turned at an angle (13), a square plinth (14), a pencil box (12), and a book (15). Teach the *Use of Diagonals* in finding centres of faces, and to test accuracy of drawing. Make a freehand drawing of a cube, and divide it for a half-cube (16); of the triangular prism (18), and of a half-opened book, in the position indicated (17), having an ornament on its cover.

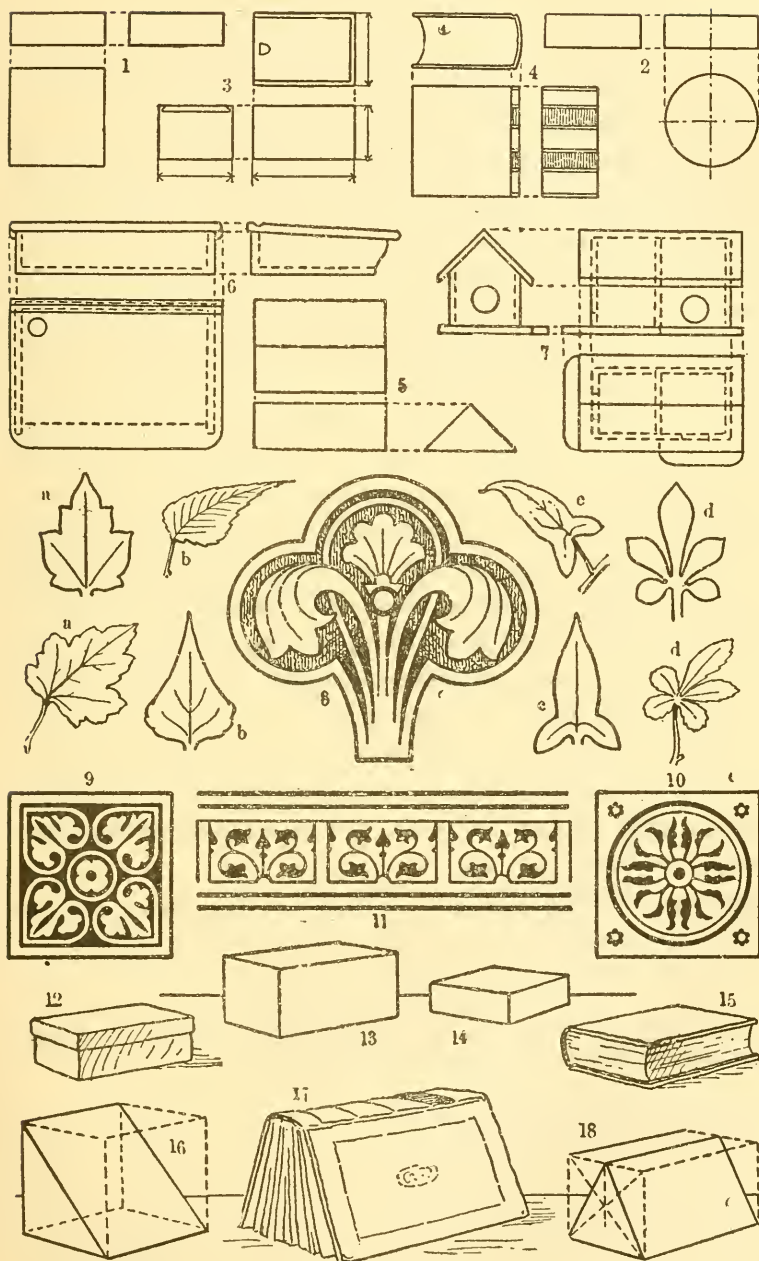
Encourage out-of-door sketching. Try to draw a shed, a barn, the town pump, a well curb.

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\* 8, from a Gothic stained-glass window, cathedral at Bourges; 9, from a Gothic stained-glass window, St. Thomas at Strasbourg; 10, a Gothic encaustic tile; 11, from a Gothic illuminated manuscript.



PLATE VII.



*Eighth and Ninth Years. (Plate VIII.)*

GEOMETRIC DRAWING. — Continue *Drawing to Scale*, 1 in.=1 ft. and  $\frac{1}{2}$  in.=1 ft., — marking dimensions. Make accurate working drawings for a book case (1). Teach *Plan and Elevation*. Draw the plan and elevations for a dog kennel (2), or for a small poultry house. Teach the representation of *plane faces oblique in three views*. Make accurate working drawings of a square pyramid (3) and of the square pyramid cut off horizontally (4) and obliquely (5). Very light equidistant, full lines usually drawn at an angle of  $45^\circ$  indicate a *section*. (See 4 and 5.)

DECORATIVE DRAWING. — Review *conventionalization of leaves*, and apply to flowers, buds, etc. Copy a historic example,\* a surface (6), of a panel (7), or of a border (9). Compare these units with the natural plant forms which they suggest. Note changes. Draw a spray of some plant containing leaves, flowers and buds: *e.g.*, the buck bean (8). Conventionalize these forms — (a, b, c, d, e). Make an original design for a border or for a panel, on balanced main lines. Finish by half-tinting the background, freehand. (See Plate VII., Fig. 8.) Notice the difference between this and mechanical half-tinting. (Compare Plates IV., 12, 13; and V., 15.)

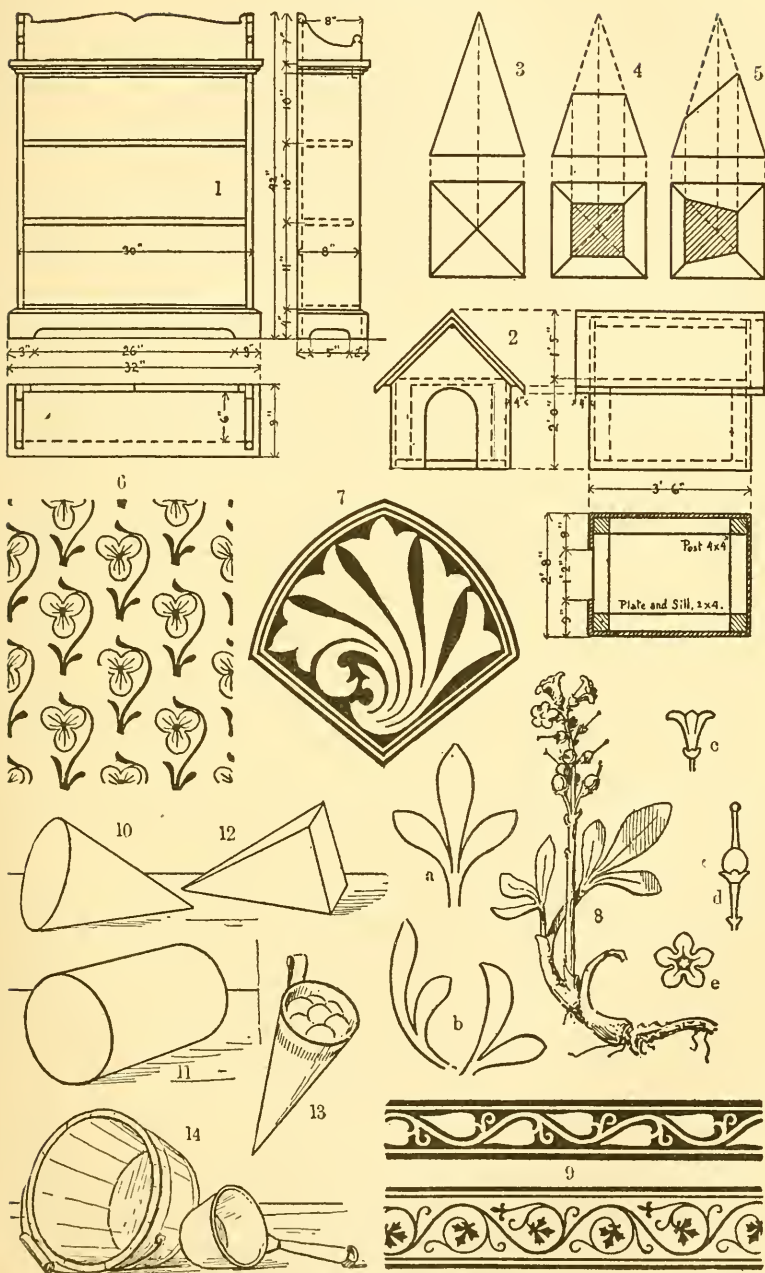
PICTORIAL DRAWING. — Study the *Relation of Axes* to other parts of objects. Make freehand drawings of a cone resting on its side (10), of a horizontal cylinder (11), of a pyramid (12), and of such objects as a cornucopia (12), water pail and dipper (14).

Encourage out-of-door sketching. Try to draw a large log, a group of barrels, a wheel-barrow, the school-house. “Not a day without a line.”

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\* 6, miniature wall ornament from a Gothic illuminated manuscript; 7, from a Gothic stained-glass window, St. Thomas at Strasbourg; 9, the upper example, Byzantine border from St. Sofia, Constantinople, the lower from a Gothic illuminated manuscript.

## PLATE VIII.



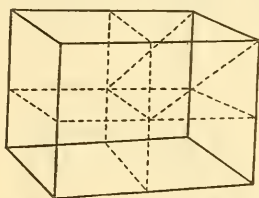
## CONSTRUCTIVE PLANE GEOMETRY.

*Eighth Year (Sixty Lessons).*

NOTE. — Numbers marked with an asterisk may be omitted if they seem too difficult. It is to be hoped, however, that most scholars will be able to do them.

1, 2. Space; its dimensions; division of space; planes; dimensions of planes.

NOTE. — Take some portion of space, as the school-room, and have the pupils exercise their imagination in dividing it by planes, cutting it in various directions.



Next let them illustrate on the black-board or paper the position of these planes, as shown in cut, dotted lines representing the planes. Have the pupils do the work with as little help as possible.

Spheres can be treated in the same way.

3. Plane figures; surfaces; lines; dimension of lines; points.

NOTE. — In planes conceived as in Lesson 1, have the pupils mentally construct figures, and then illustrate what they have imagined, as before.

4, 5. The measurement of straight lines; finding the ratio between commensurable lines.

NOTE. — Pure geometry does not deal with arbitrary standards of measurement, as the inch, foot, meter, etc. These, however, have to be used when the principles of geometry are applied to practical matters, as finding area, etc. In finding the ratio between lines, these arbitrary units should not be used; it should be found by applying one line to the other, in a way familiar to all teachers of geometry.

6, 7. The circle; its parts, as radius, arc, chord, tangent, sector, etc.

8. Measurement of circumferences and arcs. How to make equal arcs in the same circumference or in equal circumferences.

9.\* The ratio between commensurable arcs.

NOTE. — Find by application, as in Lessons 4, 5.

10, 11. Angles; right, acute, obtuse; supplementary and complementary angles.

12. If one straight line meets another so as to form adjacent angles, the angles are supplements.

NOTE.—To make a supplement to an angle, prolong one side of the given angle through the vertex.

13, 14. Angles at the centre of a circle, equal when their arcs are equal; are intercepted by a right angle, by supplementary angles.

15. How to construct an angle equal to a given angle, twice a given angle, etc.

16.\* The ratio between commensurable angles. See Lesson 9.

17. Bisecting angles and arcs.

18. Parallel lines; perpendicular lines.

19.\* Angles whose sides are parallel are equal or supplements.

20.\* When a line crosses two parallel lines, compare the alternate angles. They are equal.

21. Through a given point to draw a line parallel to a given line.

22.\* Oblique lines, extending from a point in one of two perpendicular lines to points equally distant from its feet in the other, are equal.

23, 24. Draw a line perpendicular to another; (1) from a point within the given line, (2) from a point at the end of it, (3) from a point outside of it.

25, 26. Triangles of all kinds; making a triangle equal to a given triangle.

27. Constructing a right triangle.

28,–30. Similar triangles; ratio of similitude. See Lessons 4, 5. Problems in it.

31. The isosceles triangle bisecting it.

32. Construct right triangles whose perpendicular sides will be 5 and 4; 6 and 8; how long is the hypotenuse in each case?

NOTE.—Construct the triangle carefully, and get the hypotenuse by actual measurement. Then establish the relation.

33, 34. Problems based on the right triangle.

35, 36. Sum of the angles of a triangle.



NOTE. — Cut out paper triangles; then cut off the angles, and place them adjacent on two right angles.

37, 38. Parallelograms; the rectangle and square; the rhomboid and rhombus.

39, 40. Problems in constructing them.

41, 42. Construct a square equal to the sum of two given squares; equal to their difference. See Lesson 32.

43, 44. The diagonal; it divides a parallelogram into equal triangles.

45. Area of rectangles; problems.

46, 47. Area of the rhomboid; problems.

48, 49. Problems continued.

50, 51. Area of triangles.

52, 53. Construct triangles with given sides. Taking one side for the base, construct a perpendicular to it from the vertex of the opposite angle for the altitude; find the length of this and the area of the triangle.

54, 55. Find approximately the ratio between the diameter and circumference of a circle.

NOTE. — Get the length of the circumference by means of a string, or, better, a fine wire. Then proceed as in Lessons 4, 5. The value of  $\pi$  can then be given the scholars. 3.1416 is sufficiently accurate for common use.

56. Problems in finding C when D is given, and the reverse.

57. The area of a circle.

NOTE. — Divide it into triangles.

58–60. Practical problems.

NOTE. — Each pupil should have a serviceable pair of compasses, a ruler and a sector. Cheap devices for compasses are generally not good. It will be of great practical value if the teacher can have many of the figures constructed in the school yard or on some common. Triangles and other figures can be thus laid out, and then plotted on paper to some convenient scale.

## ALGEBRA.

### *Ninth Year (One Hundred Lessons).*

1. Expressing quantities by letters; how they are added and subtracted, (1) when the same letters, (2) when different letters. Co-efficients. (Use only positive quantities.)

2. The letters which by general agreement stand for given quantities, and which for quantities that are to be found. By assigning values to  $a$ ,  $b$ ,  $c$ , etc., compute the value of  $x$  or  $y$ , in such equations as  $x = 4a - 2b$ ;  $y = 7b - 2c + d$ .

3. Solving simple problems, such as: A string eighty-four inches long is cut so that one piece is five times as long as the other; how long are the pieces? — to show the use of  $x$ .

4. Addition and subtraction continued, using positive polynomials, as  $2a + c$ ,  $a + c$ , etc.

5. The theory of negative quantities.

NOTE. — This can be simply and clearly shown by series of quantities like the following: —

— 5, — 4, — 3, — 2, — 1, 0, 1, 2, 3, 4, 5, etc.

— 5a, — 4a, — 3a, — 2a, — a, 0, a, 2a, 3a, 4a, 5a, etc.

— 5b, — 4b, — 3b, — 2b, — b, 0, b, 2b, 3b, 4b, 5b, etc.

6, 7. Drill in adding and subtracting both positive and negative quantities, by the aid of series like those given in Lesson 5.

NOTE. — In adding and subtracting negative quantities, do not have the pupils change the signs as most algebras direct. They should learn to subtract and add negative quantities as such.

8, 9. Exercise problems in addition and subtraction.

10. Multiplication and division of monomials by monomials (1) when different letters are used, (2) when the same letter occurs two or more times. (Use only positive quantities.) Exponents.

11, 12. The same, using negative quantities.

13–16: Multiplication and division of polynomials by monomials.

17. General drill in preceding elements.

18–21. Multiplication and division of polynomials by polynomials.

22, 23. General problems.

24, 25. Meaning of such expressions as  $4(a + b)$ ,  $3a(2a - 3b^2 + c)$ ; adding and subtracting them (1) when the quantities in parentheses are the same, (2) when different.

26. Factoring such expressions as  $4a + 4b$ ,  $5ac + 10ad^2 - 5a^2e$ .

27. General problems.

28-30. The parentheses in such expressions as  $a^2 + (3ab - c)$ ,  $ab - (5a + 2b - c)$ ,  $7a - (2bc - (3a + b) + 8a^2)$ . Effect on signs when the terms are taken out of the parentheses.

NOTE.—It will be found a good exercise in this process to compute the value of  $x$  in such equations as  $x = 2a^2 - (3a + c - b)$ , by assigning numerical values for  $a$ ,  $b$ , and  $c$ ; then, removing the parentheses, show what the signs of terms must be changed to, that the value of  $x$  may result the same.

31, 32. Inclosing terms in parentheses.

33, 34. Developing such expressions as  $8a + 3(2b - a)$ ,  $4a(3b - c) - 2ab$ ,  $3ab - 2a(b + (2c - e) + d)$ ; and inclosing in parentheses and factoring two or more terms of such expressions as  $b - 3a + 6c$ ,  $5m - 10n^2 + d$ .

35. Drill problems.

36. Raise binomials, such as  $a + b$ ,  $c + d$ , etc., to their second power and factor such quantities as  $m^2 + 2mn + n^2$ .

37. Raise such binomials as  $a - b$ ,  $c - d$ , etc., to their second power and factor such quantities as  $m^2 - 2mn + n^2$ .

38. Multiplying the sum of two quantities by their difference, and factoring the difference of two squares, as  $a^2 - b^2$ .

39, 40. Apply the processes learned in Lessons 36-38, in squaring such binomials as  $a + 3$ ,  $5 + c$ , etc., and in finding the equal factors of such quantities as  $a^2 + 10a + 25$ ,  $36 - 12b + b^2$ .

NOTE.—It may be well at first to perform a few of these by actual multiplication, but the final aim should be to acquire skill to do them by inspection.

41-43. Squaring such quantities as  $2a + 3b$ ,  $3ab - 5c$ , and factoring such quantities as  $25a^2 - 40ab + 16b^2$ .

44. General problems.

45. Involving to the third power simple binomials such as  $a + b$ ,  $m + n$ .

46-48. Developing such quantities as  $(x + 3)(x + 4)$ ,  $(a + 6)(a + 9)$ , first by multiplication, but finally by inspection; factoring such polynomials as  $x^2 + 8x + 15$ .

49-51. Developing such quantities as  $(a - 4)(a - 3)$ ; factoring such as  $a^2 - 3x + 2$ .

52-54. Developing such quantities as  $(x + 3)(x - 5)$ ,  $(a + 7)(a - 4)$ ; factoring such polynomials as  $y^2 + 2y - 15$ ,  $a^2 - 4y - 21$ .

55, 56. General problems.

57. The greatest common factor and least common multiple of monomials.

58, 59. Greatest common divisor of polynomials.

60, 61. Least common multiple of polynomials.

NOTE.—In Lessons 58–61, use polynomials that can be factored readily, or without too much difficulty, by inspection.

62, 63. General problems.

64, 65. Addition and subtraction of fractions having monomial terms, (1) when they have a common denominator, (2) when they have not.

66–70. Addition and subtraction of fractions having binomial terms.

71. General problems.

72–76. Multiplication and division of fractions. Reduction to lowest terms.

77, 78. The equation; axioms; how equations may be changed by the application of axiomatic truths.

79, 80. Simple equations involving one unknown quantity.

81, 82. The same containing fractions.

83–87. Problems giving simple equations of one unknown quantity.

88, 89. Equations containing two unknown quantities.

90–95. Problems giving equations containing two unknown quantities.

96, 97. General equations for arithmetical processes, as, for example, the general equations for interest,  $i = prt$ , etc.

98–100. General problems.

NOTE.—The teacher should be careful to avoid too difficult problems. It will be better for the pupils, at this stage, to do many easy ones rather than a few difficult ones. It is not expected that this ground will always be covered in just one hundred lessons; classes differ, and some will go faster than others. The teacher should take care, whatever ground is covered, to give the pupils time to think and absorb the principles. Make it a work of interest rather than routine.

#### NATURE STUDIES.

The object of this outline is to suggest a course of graded lessons possible in the several lines of nature study. Above the primary grades it is best to pursue but one or two of them

in a year or even in a course of years; *e.g.*, plants or animals in the fall and spring, minerals in the winter; or a whole year may be given to a subject, if desired. It is not intended that all lines shall be followed during each year, nor is it necessary to take all the details. The observation should be taken in close connection with, and serve as a basis for, work in language, drawing and geography, and may be supplemented by reading.

#### *First Year.*

Conversational lessons on pets, domestic animals, birds about the school, common insects, snails and other live animals, according to locality. To distinguish and name new animals, interesting facts as shown in the homes, covering and habits of the living animals.

*Language.* — At first oral; read and copy names of animals in sentences containing action and quality words; simple sketching, to illustrate habits; stories, to inculcate kindness; games and songs, to illustrate habits.

Similar observation of plants in the school-room, about the school-house and home, in the field and woods. To notice how and where they grow, to point out and name the parts of many plants, to find single qualities, habits and use of the parts to the plant.

*Language.* — Similar to above, also to give a simple oral narrative of how the plant grows. Mold forms of fruits, seeds and stems.

Collect and recognize such minerals as quartz, mica, marble, iron, lead, tin; find single qualities, using such words as hard, soft, rough, smooth, sharp, faces, points, grains, leaves, shining, bend, break.

*Suggestions.* — Vary the work from day to day; short lessons given to small groups of children are most interesting and effective. Teach new names as part of the reading lesson; provide busy work, especially sketching, as drill and review. Let the children bring some of their pets, collect insects, caterpillars to go into cocoons, shells, autumn leaves and minerals.

#### *Second Year.*

More extended observation of the animals; homes, covering, movements, eating and voices. Watch the birds as they come



in the spring, recognize and write list of names with single characteristics.

Observation of common plants; add to the first year's work parts of leaves, kinds and parts of fruits, growth of birds.

Continue collecting and making observations of minerals, and such rocks as granite, puddingstone, sandstone and slate. Find two or more properties, and combine them: *e.g.*, of what the mineral is made; kind of faces and edges; whether it can be scratched with quartz, iron nail or finger nail; easy or hard to break, using words brittle and tough; its colors; appearance in the light; simple uses. Distinguish and describe gravel, sand and clay.

*Language.*—Oral, accompanying the observation; copying descriptive sentences from the board; forming such sentences from words written on the board; keeping simple record of birds seen, of growth of buds, of changes in insects; reproduce or write from dictation short sentences from stories of animals. Molding fruits and half fruits; sketching whole plants, leaves, sections of fruit, buds on stems.

*Suggestions.*—Have written work accompany the sketches. Press and mount plants and leaves. Provide boxes for specimens of minerals and fruits, with labels. The object studied should be in the presence of the pupils during the period of the lesson. Short appropriate memory gems may be learned. Easy selections from supplementary readers or children's papers may be used in the reading lesson.

### *Third Year.*

*Animals.*—Observation of the parts of a bird in order, kinds of feathers, legs and toes, bill, eyes and ears, nests and care of the young; prominent parts of insects, and their use by the insect; collect larvæ in the fall, watch the formation of the cocoon and its bursting; other animals according to opportunity, — toads and frogs, turtles, fishes.

*Plants.*—Continue the observation of the parts of plants, the form, surface and veining of leaves; form, position and covering of stems; the kinds of roots; the parts of flowers; kinds of fruits; growth of seeds in the spring.

*Minerals and Natural Phenomena.*—Continue the observation of minerals mentioned in previous year; add others; find

many properties of each specimen. Observe the arrangement of different kinds of soil. Sunlight, heat, darkness, cold, day and night; air and its movements; forms of water in the air; notice changes in weather and seasons, using appropriate terms; life in winter, changes in fall and spring.

*Language and Suggestions.* — Continue drill in oral expression; originate simple descriptive sentences in answer to questions placed on the board; teach to combine these sentences; encourage mounting and sketching of all parts possible; molding of fruits and special stems. Let the written work take the form of the language work of the grade; select reading lessons to follow the observation exercise; continue selected stories and their reproduction. The choice of specimens will be influenced by the locality, and the order of lessons will depend somewhat on the season.

#### *Fourth Year.*

*Animals.* — Comparison and grouping of common backboned animals begun; flesh-eating animals: teeth, claws; getting and eating food; other habits; pictures and stories of similar animals of other countries; grass-eating animals: teeth, hoofs, horns; getting and eating food; pictures and stories as above; gnawing animals: teeth, claws; interesting habits; also flying, swimming and burrowing animals; parts used, and habits.

*Plants.* — Lessons on kinds of useful roots; on the form, structure and uses of stems; kinds of fruits continued (fall); growth of seeds; underground stems used in propagation; parts of flowers continued; their use to insects and to man (spring).

*Minerals and Natural Phenomena.* — Lessons on the properties of minerals and building stones which make them useful; to distinguish the common metals, and observe a few of their useful qualities; to observe more carefully the kinds and arrangement of soils in hills, plains, swamps, clay beds, top soil, subsoil, water layers and hard pan, with reference to their uses; to observe the decay of rocks in the formation of soil. Observe the effects of heat, cold, wind and moisture; changes in the life due to changes in seasons; begin a simple weather record.

*Language and Suggestions.* — Continue all the language work of the previous year in improved form. Make a labelled collection of building stones used in the town; of samples of soil from different parts; of dry fruits and seeds, showing provisions for protection and distribution; in the fall collect larvæ and cocoons, to be studied as before; in the spring plant seeds in boxes of earth, describe the growth from time to time. Use a good nature reader for stories, to supplement observation; also books and cuttings on natural history; have the stories reproduced orally and in written form.

### *Fifth Year.*

*Animals.* — Group birds: bills, legs, toes and claws; special habits; reading of foreign birds of similar orders; frogs, turtles and fishes; compare the coverings, movements, ways of getting food and eating, breathing, special senses, habits; watch development of frogs' eggs in spring.

*Plants.* — Begin the study of typical fruit, shade and ever-green trees; their parts in order, qualities, adaptation to the tree, and uses. Also typical wild plants, *e.g.*, buttercup, clover, Solomon's seal and violets (spring); plants belonging to the mustard, mint and pink families (fall). Trees and plants of the different zones, adaptation to the climate; supplement by pictures.

*Minerals.* — Continue the study of metals, forms of coal, iron and limestone, with qualities which make them useful; simple facts of geographical distribution, pictures of mines; forms of water, evaporation, condensation, freezing and the effects of each; pupils keep a simple weather chart on the board.

*Language and Suggestions.* — Drill on good oral description of the facts observed and thoughts derived; written descriptions according to a series of questions; reading about birds; sketching bills and toes of birds; trees and their parts in connection with the written work. Drawing serrate margin and lobed leaves. Collect specimens of coal, iron, limestone, metals, wood and other parts of trees, mounted on cardboard, encouraging the bringing of any foreign woods and minerals for the school collection.

*Sixth Year.*

*Animals.* — More careful study of insects; common names; homes; adaptation of covering; wings and legs; mouth parts; groups of useful and injurious insects; development of insects; observation of earthworms and their work in the soil.

*Plants.* — Continue the study of trees and wild flowers; geographical distribution of useful trees; parts of plants useful for food, *e.g.*, grains, nuts, stems, roots; foreign products; collect, distinguish useful qualities, means of distribution; parts useful for fibre, — cotton, flax, hemp, wood.

*Minerals, etc.* — Observation of any rock ledges in town, bowlders, formation of pebbles and sand, with their uses; locate ledges and gravel hills on a map of the town; observe the effect on the rivers, railroads, industries; make local collections.

Observation of the sun, its daily path during the year; varying form and position of the moon; locate and name prominent star groups, and note any change in position from night to night.

Simple experimental lessons on heat, expansion and contraction of bodies, with practical applications; changes in state of matter and the applications; use of thermometer.

*Language.* — Continue oral drill; written descriptions according to an outline of topics; pictures and reading on the habits of insects, foreign trees; myths associated with star groups, to supplement observation and furnish reproduction work. Sketch insects, trees and their parts, star groups, soil sections and apparatus used. Drawing compound leaves and flowers.

*Seventh Year.*

*Animals.* — Observation of typical animal life of the sea; *e.g.*, lobster and crab, oyster, clam and snail shells, coral and sponge; study parts as illustrating a type of animal; adaptation of parts; use to man; geographical distribution.

*Plants.* — Study of plant products; properties and uses of starch, oils, gums and resins, spices, useful woods. Simple study of the lower forms of plant life, comparing with the higher forms; their function in nature. If previous work has not been done, study trees, as indicated in the sixth year.

*Minerals.*—More careful study of the formation of soils from rocks; effect of heat on metals and other substances; good and poor conductors; radiation of heat; heating liquids by boiling; motion of water and air due to heat; practical application of the experiments; effect of heat on marble or limestone in forming lime, and its uses; note on map geographical distribution of coal, iron and limestone.

*Language.*—Oral and written description, as before; use books of reference to supplement observation; sketch shells and other animal forms, apparatus, outline maps; drawing sprays; collect shells, corals, sponges, plant products, metal and mineral products.

#### *Eighth and Ninth Years.*

*Animals and Plants.*—Review animal or plant lessons; plans of typical structure in animals; prominent marks of mammals, birds, reptiles, fishes, insects; collect animal products, *e.g.*, wool, leather, fur, feathers, ivory, wax, glue; qualities which make them useful; processes of manufacture, essential parts of plants; processes of growth; study specimens of prominent families of plants; drawings of whole plants. Topical outlines.

*Physical and Chemical Forces.*—Action of cohesion and adhesion on common substances; explaining states of matter; properties of matter, such as hardness, brittleness, elasticity, etc.; practical uses; gravity, and its application in weight; support of bodies; balances; simple machines; pressure of water and air; pumps and barometer; heat and its effects; thermometer, steam-engine, etc.; simple lessons on combustion; chemistry of foods, of cleansing, of pure and impure air, of acids on minerals and metals; simple facts of magnetism, electricity, light and sound.



*Summary of Nature Study.**First Year.*

Minerals, etc.	Plants.	Animals.	Language.
Recognize common minerals; single qualities of matter.	Recognize common plants; simplest parts; single qualities and habits.	Recognize many animals' homes; covering, habits.	Conversational; copy names; molding, sketching.

*Second Year.*

Recognize more minerals; two or more qualities; distinguish soils.	Recognize more plants; parts of leaves; parts of fruits; growth of buds.	Domestic and pets; homes, covering, moving, eating, voices; birds, single qualities and habits.	Conversational; make sentences, words given; mold fruits and stems; sketch leaves, fruits and buds.
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*Third Year.*

Same minerals; find many qualities; arrangement of soil; sunlight, its effects; forms of water; changes in seasons.	Parts of leaves continued; of stems, of roots; flowers; kinds of fruits; growth of seeds.	Birds, parts; insects, simple parts, larvæ.	Oral drill; simple sentences by questions; combine; mold fruits, special stems; sketch; reading.
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*Fourth Year.*

Minerals and rocks used in building; begin metals; value of soils in their arrangement; effects of heat and cold, wind and moisture; simple weather record.	Kinds of useful roots; structure of stems; underground stems; parts of flowers; kinds of fruits continued; growth of seeds continued.	Group backboneed animals, especially mammals; foreign animals of same kind.	Continue the above; drawing simple leaves.
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*Fifth Year.*

Continue qualities of metals; forms of coal, iron, lime; mines; forms of water; evaporation, condensation and freezing; weather record.	Study of trees,—shade, fruit, evergreen; typical wild plants, studied by parts in order.	Group birds; foreign birds; frogs and fishes.	Oral drill; written descriptions by questions; sketching; drawing serrate and lobed leaves.
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*Sixth Year.*

Study of ledges, boulders, pebbles and sand; quarries; star groups, sun, moon; effect of heat, expansion, contraction; changes in state of matter.	Continue trees; geographical distribution; food and fibre plants studied.	Grouping of useful and injurious insects.	Description by topics; supplementary reading; drawing compound leaves and flowers.
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*Summary of Nature Study — Concluded.**Seventh Year.*

Minerals, etc.	Plants.	Animals.	Language.
Formation of soil; effect of heat on metals, limestone; geographical district of same; good and poor conductors and radiators; motion caused by heat.	Plant products, — starch, oils, gums, spices, useful woods; geographical distribution; simple study of lower forms of plant life.	Animals of the sea which are typical and useful; geographical distribution.	Description by topics; use of reference books, maps; drawing sprays.

*Eighth and Ninth Years.*

Cohesion and adhesion; gravity, weight; machines; pressure of water and air; effect of heat; chemistry of combustion, foods, cleansing, pure and impure air, metals; magnetism; electricity; light; sound.	Review; essential parts of plants; process of growth; families of plants studied.	Review; types of animal structure; mammals, birds, reptiles, fishes; insects studied more carefully.	Description of experiments, observation and inference; topical outlines; drawing of whole plants and apparatus.
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## SLOYD.

[The following course of lessons in Sloyd, by G. Larsson, is inserted by permission of the author, who reserves all rights in the original copy.]

Number.	Model.	Exercises.	Tools.
1, . .	Wedge, . . .	Straight, end and oblique whittling.	Knife, rule, lead pencil, . . .
2, . .	Flower pin, . . .	Long and point whittling; sand papering.	Sand paper, . . . . .
3, . .	Flower stick, . .	Rip sawing; square and edge planing; marking with gauge; drawing by try square.	Splitting saw, back saw, jack plane, try square, marking gauge.
4, . .	Penholder, . . .	Curve whittling; perpendicular boring; fitting a peg.	Drill bit, with point, . . .
5, . .	Cutting board, . .	Surface and end planing; round sawing; horizontal boring; filing; sand papering, with block.	Crosscut saw, turning saw, compasses, flat file, block plane, auger bit.
6, . .	Flower-pot stand, .	Nailing, and using of bench hook.	Hammer, bench hook, nail set, smoothing plane.
7, . .	Flower-pot stool, .	Halved together joint, . . .	Chisel, . . . . .
8, . .	Bench hook, . . .	Gluing; screwing; perpendicular chiselling; boring with brad awl.	Screw-driver, rose countersink and brad awl.
9, . .	Hatchet handle, . .	Curve sawing; modelling with spokeshave; scraping.	Spokeshave, half-round file, cabinet scraper.
10, . .	Hammer handle, . .	Symmetrical form work, . . .	Half-round rasp, . . . . .
11, . .	Butter or dough spade.	Wedge planing; half round filing.	. . . . .
12a,*	Key board, . . .	Spacing with compasses; veining and carving.	Veiner and skew chisel, . . .
12, . .	Paper knife, . . .	Punching and notching; filing edge; long oblique planing.	Round file, carver's punch, . .
13, . .	Ruler, . . . . .	Bevelling edge with jack plane and file.	Centre bit, . . . . .
14, . .	Towel roller, . . .	Fitting axle; round planing, . .	. . . . .
15, . .	Frame, . . . . .	Open mortise and tenon joint; making and fitting dowels.	Mortise gauge, . . . . .
16, . .	Nail box, . . . . .	Fitting and nailing square joints,	. . . . .
17,*	Pen tray, . . . . .	Grooving with gouge; carving,	Gouge, round cabinet scraper,
18, . .	Hat rack, . . . . .	Straight edge bevelling with plane; bevelling with knife; chamfering with chisel.	. . . . .
19a, . .	Picture frame, . .	Grooving with chisel, . . .	. . . . .
19, . .	Picture frame, . .	Mitring, . . . . .	. . . . .
20a,*	Cake spoon, . . . .	Compass sawing, . . . . .	Compass saw, . . . . .
20, . .	Ladle, . . . . .	Cutting with drawing knife, . .	Drawing knife, . . . . .
21,*	Lamp bracket, . . .	Plain dovetailing; carving, . .	Mallet, marking awl, . . .
22, . .	Knife box, . . . . .	Half round bevelling, with plane.	. . . . .
23,*	Book rack, . . . . .	Fitting hinges; shellacking, . .	Carver's parting tool, . . .
24, . .	Tray, . . . . .	Fixing with screws; dovetail with a mitre.	. . . . .
25, . .	Cabinet, . . . . .	Lap or drawer dovetail; sinking iron plates; fitting lock.	Mitre box, clamps and plow, .

\* Wood turning may be practised.

## SLOYD.

[The following course of lessons in Sloyd, by G. Larsson, is inserted by permission of the author, who reserves all rights in the original copy.]

Kind of Wood.	Dimensions. Inches.	Exercises in Drawing.
Pine, . . . . .	$3 \times 1 \times \frac{1}{4}$	Parallel, converging and curved lines.
Pine, . . . . .	$12 \times \frac{1}{2}$	- -
Pine, . . . . .	$15 \times \frac{1}{2}$	To find the centre of a square. Lines drawn to meet around a square stick.
Pine, . . . . .	$8 \times \frac{1}{2}$	- -
Pine, . . . . .	$18 \times 7 \times \frac{5}{8}$	To bisect a line and describe a semicircle, with given radius. To find the centre of a circle and draw an arc, the radius and two square tangents being given.
Pine, . . . . .	$20 \times 6$	Oblong.
Pine, . . . . .	$5\frac{1}{2} \times 1 \times \frac{3}{4}$	- -
Pine and cherry, . . . . .	$14 \times 5\frac{1}{2} \times \frac{1}{2}$	Hypotenuse of a triangle, with sides given.
Sycamore, . . . . .	$16\frac{1}{4} \times 2\frac{3}{4} \times \frac{3}{4}$	Free-hand, compound curves, oval, ellipse.
Cherry, . . . . .	$12 \times 1\frac{5}{16} \times 1\frac{3}{16}$	Free-hand, symmetrical compound curves.
Cherry, . . . . .	$13 \times 4\frac{1}{2} \times \frac{3}{4}$	Arcs from given centres. Free-hand symmetrical curved lines.
Pine, . . . . .	$15 \times 2 \times \frac{1}{2}$	Isosceles triangle. Rhombus. To construct an equilateral triangle, with base given. To find the centre of an equilateral triangle.
Maple, . . . . .	$13 \times 1\frac{1}{4} \times \frac{1}{4}$	Arcs, with points given.
Maple, . . . . .	$16 \times 1\frac{3}{4} \times 1\frac{3}{16}$	- -
Pine, . . . . .	$18\frac{3}{4} \times 4\frac{3}{4} \times \frac{1}{2}$	Rectangular prism. Octagonal prism. Concentric circles. Arcs of concentric circles. Parallel oblique lines. Obtuse-angled triangles.
Pine, . . . . .	$12 \times 10 \times \frac{7}{8}$	- -
White wood, . . . . .	$8 \times 5\frac{1}{2} \times 3\frac{1}{2}$	Spacing for nails.
Cherry, . . . . .	$10\frac{1}{2} \times 2\frac{1}{4} \times \frac{3}{4}$	Diagonals. Arcs, with points given.
Pine, . . . . .	$18 \times 2 \times \frac{5}{8}$	- -
Pine, . . . . .	$10 \times 8\frac{3}{4} \times 1$	- -
Pine, . . . . .	$8 \times 5\frac{3}{4} \times 1\frac{1}{4}$	- -
Cherry, . . . . .	$13 \times 2 \times \frac{5}{8}$	Free-hand curved lines.
Cherry, . . . . .	$12 \times 3\frac{1}{2} \times 1\frac{3}{8}$	Free-hand curved lines.
Pine, . . . . .	$9\frac{1}{4} \times 5\frac{1}{2} \times \frac{1}{2}$	Arcs, with points given. Pattern for dovetailing. Geometric design for ornament.
Pine, . . . . .	$12\frac{1}{2} \times 9 \times 2\frac{1}{4}$	Pattern for dovetailing. Arcs, with points given.
Cherry and mahogany, . . . . .	$16 \times \frac{1}{2} \times \frac{7}{16}$	Arcs, with points given. Geometric design for ornament.
Pine, . . . . .	$16 \times 10\frac{5}{16} \times 2\frac{1}{4}$	To find the centre of an oblong. Arcs, from given points. Geometric design for ornament.
Pine, . . . . .	$26\frac{1}{2} \times 14\frac{1}{2} \times 6$	Oblongs. Arcs. Geometric design. Dovetailing. Work from scale of one-half.

The time required to complete the exercises is about 200 hours.

## KINDS AND AMOUNT OF WOOD REQUIRED.

## FOR MODELS 1 TO 15.

Pine,	kiln-dried,	planed,	$\frac{7}{8} \times 7\frac{1}{2}$	inches = 4	square feet.
"	"	"	$\frac{1}{2} \times 6$	" = $\frac{1}{2}$	" foot.
"	"	rough,	$\frac{5}{8} \times 6$	" = $2\frac{1}{2}$	" feet.
"	"	"	$2 \times 2$	" = $\frac{1}{3}$	" foot.
Cherry,	"	"	$1 \times 4$	" = $\frac{1}{2}$	" "
"	"	"	$\frac{1}{2} \times 5$	" = $\frac{1}{2}$	" "
Maple,	"	planed,	$\frac{1}{4} \times 4$	" = $\frac{1}{2}$	" "
Sycamore,	"	rough,	$1 \times 6$	" = $\frac{1}{2}$	" "

*Cost of wood for the first fifteen models, 64 cents.*

## FOR MODELS 16 TO 25.

Pine,	kiln-dried,	planed,	$\frac{7}{8} \times 7$	inches = $2\frac{1}{2}$	square feet.
"	"	"	$\frac{1}{2} \times 7$	" = 4	" "
"	"	"	$\frac{1}{2} \times 13\frac{1}{2}$	" = 5	" "
"	"	rough,	$\frac{5}{8} \times 9$	" = 5	" "
White wood,	"	"	$\frac{5}{8} \times 7$	" = $1\frac{1}{2}$	" "
Cherry,	"	"	$\frac{1}{2} \times 6$	" = $1\frac{1}{2}$	" "
"	"	"	$1\frac{1}{2} \times 4$	" = $\frac{1}{2}$	" foot.
Mahogany,	"	planed,	$\frac{1}{2} \times 6$	" = $\frac{1}{2}$	" "

*Cost of wood for the series, \$1.94.*

## GOOD BEHAVIOR.

The statutes of the Commonwealth, section 1, chapter 44, require the teachers of the public schools to give instruction in good behavior, as well as in the common branches of study. When we consider how much of virtue there is in good behavior, we shall see the importance of introducing the subject as an essential element in our system of education.

But good behavior as an object of instruction must not be confounded with good manners or with politeness. Good manners are those external forms of conduct which express a true sense of the proprieties of life. Politeness is a gracefulness of manner which denotes a desire to please others by anticipating their wants and wishes, and by avoiding whatever may give offence. Good behavior is that propriety of conduct which indicates a purpose to do what ought to be done. Good behavior holds an inseparable relation to goodness. Truthfulness is the soul of good behavior. A truthful spirit predisposes



the mind to exercise feelings of respect for superiors, to have a proper regard for authority, to be grateful for favors received, and to be inclined to make sacrifices, if necessary, that others may be made more happy or more prosperous.

The secret of Thomas Arnold's success in moulding the character of his pupils is found in his deep love for them. He entered heartily into their amusements, as well as into their mental occupations. He brought his own cultivated mind near to their minds, and awakened in them a love for the truth and good conduct; and the boys who graduated from his school, went away into life bearing with them something of the spirit of their great teacher. Dr. Arnold owed his success as a teacher to the insight he had into the inner life of his pupils, and to his knowledge of the springs of human action.

Those who limit their study of persons to that which may be observed through the senses are apt to form a low estimate of the young. There are laws in the human mind that control it in all its activity, and these laws are principles that determine the method of teaching to be employed. Individual characteristics may modify the application of the method, but the method and the principles upon which it is founded are not subject to modification.

The young are influenced by living examples rather than by precepts and argument. They are inclined to imitate those whom they love, and under favorable conditions will grow to be like them. It is necessary, therefore, that the teachers of youth should be models of good behavior; that they should themselves practise all those forms of expression implied in good manners and politeness, conscientiously avoiding all things that exhibit a want of good taste and of intelligent refinement.

#### MORALS.

\* Section 15, chapter 44, of the Public Statutes, provides for instruction in morals. Under this provision it is plainly the duty of every school-teacher to turn the attention of his pupils to the moral quality of their acts, and to lead them into a clear understanding and constant practice of every virtue. The relations which children hold to their companions and to their teachers make school life a most favorable opportunity for moral instruction. All the virtues enumerated in the statute

may be cultivated in connection with the daily exercises of the schools.

Piety is a filial reverence for parents and benefactors and country. The teacher should hold the relation of parent to the children committed to his care, and endeavor to introduce into the school as much of the home spirit as possible. If he makes a good home of his school, and exercises toward the children the love of a wise parent, he will furnish a constant occasion for the cultivation of that filial regard for friends and benefactors which the statute calls piety.

Justice is a state of the mind in which one is inclined to render to others that which is due. The principles of justice may be impressed upon the minds of the children by training them in all the relations they hold to one another and to their teachers to render that which is due, and to refrain from injuring others in their person or in anything which they lawfully possess. They must not be allowed to disregard natural rights. They must be made conscious that obedience to the regulations of the school is due, and that justice is violated whenever they fail to contribute as much as possible by their good conduct to their own success and to the success of their school-mates.

In this training the teacher must remember that children have rights also that he is bound to respect. Justice demands protection for them against all forms of injury. It should not be forgotten in directing the young, that they have little power of self-control. The youthful spirit is naturally opposed to restraint. The quiet of the school-room is unnatural. There is no principle active in the minds of the children that is able to hold them to systematic study. Temptations are strong, while the power of resistance is weak. The good results of obedience cannot be used as motives until one is able to reason from experience. The young are likely to act from impulse rather than from a thoughtful consideration of consequences. All these things the teacher must know, that he may not demand more than is due. It is a serious thing to require more of young pupils than they can perform, and then charge the failure to a voluntary disobedience. They are easily disheartened by a loss of reputation. A reward for good conduct is a better means of moral training than a punishment for bad conduct. The best way to crowd bad thoughts out of a youth-

ful mind is to crowd in good ones. Teachers should have a good knowledge of the human nature of their pupils, and be as ready to perform just acts towards their pupils as they are to demand them. Under such influences the young will have the principles of justice impressed upon their minds in an intelligent and efficient manner.

Truth is the agreement of one's thoughts with their objects. The objects of moral truth are the moral qualities of human conduct. The principles of truth are impressed on the mind when it is made to feel the obligation it is under to discover the truth as far as possible, to express the truth accurately to other minds, and to act in accordance with its conscious obligations.

The children are in the pursuit of truth in all their studies. If they are taught by the method that requires them to obtain their knowledge by a careful study of the objects of knowledge, the true occasions will be presented for that agreement between the two which is called truth. Such study, with the success that naturally results from it, creates a love for the truth and a dissatisfaction with all that is false. A love of physical truth, and skill in finding it, will lead to the love of moral truth, and to a preparation for its successful pursuit.

In connection with those exercises that have for their object the discovery of the truth, abundant opportunity should be given for its expression. Opportunities will be found in the daily recitations, and whenever the pupils are required to give an account of their conduct. The children should be trained to tell the exact truth when they illustrate and define their topics of study. In this way they will form the habit of telling the truth when they define their own state of mind, and when they give an account of their conduct. Later in the course attention may be directed to the beauty of truth, and to the relations it holds to the existence of society and to the affairs of private life.

It is of the highest importance that the teacher be himself a truthful person. By his example he will then illustrate the doctrine he teaches. The value he places upon the truth will determine its value in the minds of his pupils, and his method of illustrating his ideas of its character will soon become their method.

The love of truth is a cardinal virtue. Taken in its full

sense, it includes all the virtues which the human mind is adapted to possess.

Patriotism is the love of one's country. An intelligent patriotism is a product of education, and not of the instinct. As it is essential to the establishment and to the continued existence of the State, it should be cultivated in the schools. The young should know as much as possible of the good country in which they live, of its institutions, its civil polity and its history. They should be made familiar with the history of the heroic deeds of the founders of our free government and of those who have preserved it through all its subsequent perils. Such knowledge will awaken in their minds that love of country which, in the estimation of a Roman citizen, was one of the noblest virtues.

Humanity and universal benevolence constitute kindness and sympathy for the whole human race. These dispositions are the products of that education which sets the mind free from prejudice and selfishness, and directs its attention to the relief of want and suffering wherever they may be found. Pestalozzi was accustomed to invite the boys in his school to go with him to visit the poor children of the neighborhood, and to relieve, by their own efforts, the suffering they found. At school the pupils who were so fortunate as to be able to bring with them some dinner, were encouraged to share it with those who had none. The boys experienced great pleasure in the performance of these kind acts, and the pleasure enjoyed led to a repetition of them, until a humane and benevolent disposition was established. Children may be trained, from their earliest years of intelligent activity, to have a regard for the happiness and well-being of those with whom they associate. This regard after a time will be likely to become universal, and include the whole human race.

Sobriety, as used in the statute, probably has reference to that calm, thoughtful state of mind which is most favorable for wise judgment and judicious action. Industry is habitual diligence in any physical or intellectual employment, and is directly promoted by sobriety. Frugality is a wise and economic use of what a sober industry has produced. If the pupils are made conscious that youth is a probation for manhood, that their place in life will be fixed by the use they make



of early opportunities, they will be likely to exercise a thoughtful earnestness in all their school work, and form the habit of putting to the best use all their acquisitions. Children are made interested in those occupations that procure for them pleasing products. By careful teaching they may be trained into the habit of saving and wisely using those things they have produced.

Chastity, moderation and temperance refer to that self-control which it is the true province of a generous education to produce. Self-government is the great end that school government should ever aim to secure.

The first acts of the child are instinctive. They do not imply either deliberation or the power of independent choice. Later the young mind is moved by motives found in the appetites, or in the desires that arise from the wants of the body. Such mental movements imply acts of the will, but no true deliberation. In more mature life the motives that occasion activity may have their origin in the mind itself. Such motives arise from the wants of the spiritual nature, and imply both deliberation and a free choice. While the child is subject to the mechanical and animal principles of action, he should be under the control of those who understand his nature and are interested in its proper development. As soon as he finds the source of control within himself, he is free. He is then able to deliberate and to choose the best ends. The rational principle is the highest, and is the ruling principle in the minds of those who have been properly controlled during the passive periods of life.

From the first, great care should be exercised over the child's physical constitution. A sound body is a most important condition of sound morals. Disease may be the occasion of all forms of intemperance. A natural appetite demands simply a proper amount of nutritious food. While the body is free from fever there is no call for stimulants or narcotics. If the fever exists, the demand is often so constant and imperative that neither a knowledge of the effects of intemperance nor the threatened penalties of law have any controlling influence. An unhealthy physical constitution is often an inheritance. It more frequently originates in the unnatural treatment of the young.



The importance of good physical health cannot be over-estimated. The highest usefulness and happiness and personal success are impossible without it. The well-being of individuals and of the State requires that parents and teachers should direct their earnest attention to that instruction which has for its object the formation and practice of good physical habits. Let the instruction be given at home and at school. Let it be accompanied with an effort to impress on the minds of the children the moral obligation they are under to take good care of their physical bodies. If this is skilfully and faithfully done, we have good reason to expect that chastity, moderation and temperance will prevail, and the cultivation of the virtues will lay the foundation for the attainment of all those ends for which the public schools of the Commonwealth were established.

## SUPERINTENDENTS OF SCHOOLS.

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Under Expense of Supervision, page 75 of this report, is a table showing the number of towns employing school superintendents, also the number still working under the school committee system. The following tables give by counties, in alphabetical order, the towns having superintendents, also the names of the superintendents, alphabetically arranged. The whole number of superintendents is one hundred and thirty-five. Of these, ninety-two are employed under the law of 1854, which requires the entire expense to be borne by the towns; six are employed under the law of 1870, which also requires the expense to be borne by the towns, but which authorizes the towns to unite for this purpose. The remainder, thirty-seven, are employed under the law of 1888, which applies to towns whose valuation does not exceed two and a half million dollars. This class of towns is entitled to receive aid from the money appropriated for this purpose by the State.

### *Towns Employing School Superintendents throughout the State for the Year 1892.*

BY COUNTIES.	Superintendent.	Residence.
<b>BARNSTABLE.</b>		
Barnstable, . . . .	S. W. Hallett, . . . .	Hyannis.
Bourne, . . . . .	Elmer L. Curtiss, . . . .	Sandwich.
Dennis, . . . . .	W. E. Chaffin, . . . . .	South Dennis.
Eastham, . . . . .	Sanford W. Billings, . . . .	Provincetown.
Falmouth, . . . . .	T. A. Walker, . . . . .	Falmouth.
Harwich, . . . . .	S. W. Billings, . . . . .	Provincetown.
Mashpee, . . . . .	Elmer L. Curtiss, . . . . .	Sandwich.
Orleans, . . . . .	Hiram Myers, . . . . .	Orleans.
Provincetown, . . . .	S. W. Billings, . . . . .	Provincetown.
Sandwich, . . . . .	Elmer L. Curtiss, . . . . .	Sandwich.
Wellfleet, . . . . .	S. W. Billings, . . . . .	Provincetown.
Yarmouth, . . . . .	W. E. Chaffin, . . . . .	South Dennis.
<b>BERKSHIRE.</b>		
Adams, . . . . .	W. P. Beckwith, . . . . .	Adams.
Becket, . . . . .	Metcalf J. Smith, . . . . .	Middlefield.
Cheshire, . . . . .	Earl Ingalls, . . . . .	Cheshire.

*Towns Employing School Superintendents, etc. — Continued.*

BY COUNTIES.	Superintendent.	Residence.
<b>BERKSHIRE — Concluded.</b>		
Dalton, . . . .	Earl Ingalls, . . . .	Cheshire.
Egremont, . . . .	Wm. W. Abbott, . . . .	Sheffield.
Lanesborough, . . . .	Earl Ingalls, . . . .	Cheshire.
New Marlborough, . . . .	Wm. W. Abbott, . . . .	Sheffield.
North Adams, . . . .	Anson D. Miner, . . . .	North Adams.
Pittsfield, . . . .	A. M. Edwards, . . . .	Pittsfield.
Richmond, . . . .	Wm. W. Abbott, . . . .	Sheffield.
Sheffield, . . . .	Wm. W. Abbott, . . . .	Sheffield.
Stockbridge, . . . .	Frank E. Parlin, . . . .	Stockbridge.
Tyringham, . . . .	Jerome Crittenden, . . . .	Tyringham.
Washington, . . . .	Metcalf J. Smith, . . . .	Middlefield.
West Stockbridge, . . . .	Wm. W. Abbott, . . . .	Sheffield.
<b>BRISTOL.</b>		
Attleborough, . . . .	J. O. Tiffany, . . . .	Attleborough.
Dartmouth, . . . .	S. S. Crocker, . . . .	Dartmouth.
Dighton, . . . .	Joseph E. Sears, . . . .	Dighton.
Easton, . . . .	Ed. B. Maglathlin, . . . .	North Easton.
Fall River, . . . .	William Connell, . . . .	Fall River
Mansfield, . . . .	Edward P. Fitts, . . . .	Mansfield
New Bedford, . . . .	William E. Hatch, . . . .	New Bedford.
North Attleborough, . . . .	W. E. Hobbs, . . . .	North Attleborough.
Raynham, . . . .	R. W. McKeen, . . . .	East Bridgewater.
Rehoboth, . . . .	J. I. Chaffee, . . . .	Rehoboth.
Seekonk, . . . .	J. I. Chaffee, . . . .	Rehoboth.
Swansea, . . . .	J. I. Chaffee, . . . .	Rehoboth.
Taunton, . . . .	C. F. Boyden, . . . .	Taunton
Westport, . . . .	S. S. Crocker, . . . .	Dartmouth.
<b>ESSEX.</b>		
Andover, . . . .	Frank O. Baldwin, . . . .	Andover.
Boxford, . . . .	F. J. Stevens, . . . .	Boxford.
Gloucester, . . . .	Freeman Putney, . . . .	Gloucester.
Haverhill, . . . .	Albert L. Bartlett, . . . .	Haverhill.
Lawrence, . . . .	William C. Bates, . . . .	Lawrence.
Lynn, . . . .	O. B. Bruce, . . . .	Lynn.
Manchester, . . . .	John B. Gifford, . . . .	Marblehead.
Marblehead, . . . .	John B. Gifford, . . . .	Marblehead.
Newburyport, . . . .	William P. Lunt, . . . .	Newburyport.
Rockport, . . . .	Miss M. A. Wood, . . . .	Rockport.
Salem, . . . .	Wm. A. Mowry, . . . .	Salem.
<b>FRANKLIN.</b>		
Buckland, . . . .	A. L. Safford, . . . .	Shelburne.
Charlemont, . . . .	D. H. Lamberton, . . . .	Charlemont.
Colrain, . . . .	A. L. Safford, . . . .	Shelburne.
Conway, . . . .	E. W. Goodhue, . . . .	East Whately.
Erving, . . . .	Miss Lizzie A. Mason, . . . .	Orange.
Hawley, . . . .	D. H. Lamberton, . . . .	Charlemont.
Heath, . . . .	D. H. Lamberton, . . . .	Charlemont.
Monroe, . . . .	D. H. Lamberton, . . . .	Charlemont.
Orange, . . . .	Miss Lizzie A. Mason, . . . .	Orange.
Rowe, . . . .	D. H. Lamberton, . . . .	Charlemont.
Shelburne, . . . .	A. L. Safford, . . . .	Shelburne.
Sunderland, . . . .	E. W. Goodhue, . . . .	East Whately.
Warwick, . . . .	Mrs. J. C. Proctor, . . . .	Warwick.
Wendell, . . . .	Miss Lizzie A. Mason, . . . .	Orange.
Whately, . . . .	E. W. Goodhue, . . . .	East Whately.
Williamsburg, . . . .	E. W. Goodhue, . . . .	East Whately.
<b>HAMPDEN.</b>		
Agawam, . . . .	U. G. Wheeler, . . . .	Agawam.
Brimfield, . . . .	Miss C. A. Wood, . . . .	Monson.

*Towns Employing School Superintendents, etc. — Continued.*

BY COUNTIES.	Superintendent.	Residence.
<b>HAMPDEN — Concluded.</b>		
Chester, . . . . .	Metcalf J. Smith, . . . . .	Middlefield.
Chicopee, . . . . .	R. H. Perkins, . . . . .	Chicopee.
Granville, . . . . .	U. G. Wheeler, . . . . .	Agawam.
Holyoke, . . . . .	Edwin L. Kirtland, . . . . .	Holyoke.
Monson, . . . . .	Miss C. A. Wood, . . . . .	Monson.
Southwick, . . . . .	U. G. Wheeler, . . . . .	Agawam.
Springfield, . . . . .	Thomas M. Balliet, . . . . .	Springfield.
Westfield, . . . . .	G. H. Danforth, . . . . .	Westfield.
West Springfield, . . . . .	C. E. Stevens, . . . . .	West Springfield.
<b>HAMPSHIRE.</b>		
Amherst, . . . . .	J. B. Childs, . . . . .	Amherst.
Easthampton, . . . . .	B. C. Day, . . . . .	Easthampton.
Middlefield, . . . . .	Metcalf J. Smith, . . . . .	Middlefield.
Northampton, . . . . .	Alvin F. Pease, . . . . .	Northampton.
Pelham, . . . . .	Herbert R. Davidson, . . . . .	Pelham.
Pre-cott, . . . . .	H. N. Grover, . . . . .	Prescott.
Southampton, . . . . .	B. C. Day, . . . . .	Easthampton.
Westhampton, . . . . .	B. C. Day, . . . . .	Easthampton.
Williamsburg, . . . . .	E. W. Goodhue, . . . . .	East Whately.
<b>MIDDLESEX.</b>		
Acton, . . . . .	Edward Dixon, . . . . .	West Brookfield.
Arlington, . . . . .	I. Freeman Hall, . . . . .	Arlington.
Ashby, . . . . .	H. S. Brooks, . . . . .	Ashby.
Ashland, . . . . .	A. T. Lewis, . . . . .	Ashland.
Ayer, . . . . .	Edward P. Barker, . . . . .	Ayer.
Bedford, . . . . .	L. T. McKenney, . . . . .	Bedford.
Belmont, . . . . .	I. Freeman Hall, . . . . .	Arlington.
Billerica, . . . . .	L. T. McKenney, . . . . .	Bedford.
Boxborough, . . . . .	J. S. Moulton, . . . . .	Westford.
Burlington, . . . . .	L. T. McKenney, . . . . .	Bedford.
Cambridge, . . . . .	Francis Cogswell, . . . . .	Cambridge.
Carlisle, . . . . .	L. T. McKenney, . . . . .	Bedford.
Chelmsford, . . . . .	George F. Snow, . . . . .	Chelmsford.
Clinton, . . . . .	C. L. Hunt, . . . . .	Clinton.
Concord, . . . . .	William L. Eaton, . . . . .	Concord.
Dracont, . . . . .	J. C. Knowlton, . . . . .	Tewksbury.
Everett, . . . . .	R. J. Condon, . . . . .	Everett.
Framingham, . . . . .	O. W. Collins, . . . . .	South Framingham.
Holliston, . . . . .	Fred. C. Tenney, . . . . .	Holliston.
Hopkinton, . . . . .	A. T. Lewis, . . . . .	Ashland.
Lexington, . . . . .	James N. Ham, . . . . .	Lexington.
Lincoln, . . . . .	L. T. McKenney, . . . . .	Bedford.
Littleton, . . . . .	Edw. P. Barker, . . . . .	Ayer.
Lowell, . . . . .	A. K. Whitcomb, . . . . .	Lowell.
Malden, . . . . .	Chas. A. Daniels, . . . . .	Malden.
Marlborough, . . . . .	Henry R. Roth, . . . . .	Marlborough.
Medford, . . . . .	Ephraim Hunt, . . . . .	Medford.
Melrose, . . . . .	G. C. Channell, . . . . .	Melrose.
Natick, . . . . .	Chas. E. Hussey, . . . . .	Natick.
Newton, . . . . .	Geo. I. Aldrich, . . . . .	Newtonville.
North Reading, . . . . .	J. C. Knowlton, . . . . .	Tewksbury.
Pepperell, . . . . .	Edw. P. Barker, . . . . .	Ayer.
Shirley, . . . . .	Mrs. Susan N. Barker, . . . . .	Ayer.
Somerville, . . . . .	Clarence E. Meleney, . . . . .	Somerville.
Stow, . . . . .	J. S. Moulton, . . . . .	Westford.
Sudbury, . . . . .	Edward J. Cox, . . . . .	South Sudbury.
Tewksbury, . . . . .	J. C. Knowlton, . . . . .	Tewksbury.
Townsend, . . . . .	A. G. Stearns, . . . . .	West Townsend.
Tyngsborough, . . . . .	J. C. Knowlton, . . . . .	Tewksbury.
Waltham, . . . . .	Henry Whittemore, . . . . .	Waltham.
Watertown, . . . . .	Geo. R. Dwelley, . . . . .	Watertown.

*Towns Employing School Superintendents, etc. — Continued.*

BY COUNTIES.	Superintendent.	Residence.
<b>MIDDLESEX — Concluded.</b>		
Westford, . . . .	J. S. Moulton, . . . .	Westford.
Wilmington, . . . .	L. T. McKenney, . . . .	Bedford.
Winchester, . . . .	Ephraim Hunt, . . . .	Medford.
Woburn, . . . .	F. B. Richardson, . . . .	Woburn.
<b>NORFOLK.</b>		
Bellingham, . . . .	N. W. Sanborn, . . . .	Bellingham.
Braintree, . . . .	I. H. Horne, . . . .	Braintree.
Brookline, . . . .	S. T. Dutton, . . . .	Brookline.
Canton, . . . .	Jas. S. Perkins, . . . .	Canton.
Cohasset, . . . .	Louis P. Nash, . . . .	Hingham.
Dedham, . . . .	O. S. Williams, . . . .	Dedham.
Foxborough, . . . .	J. R. Potter, . . . .	Walpole.
Franklin, . . . .	F. W. Sweet, . . . .	Franklin.
Medway, . . . .	Fred. C. Tenney, . . . .	Holliston.
Milton, . . . .	C. H. Morss, . . . .	Milton.
Millis, . . . .	Fred. C. Tenney, . . . .	Holliston.
Norfolk, . . . .	J. R. Potter, . . . .	Walpole.
Norwood, . . . .	M. J. O'Brien, . . . .	Norwood.
Quincy, . . . .	H. W. Lull, . . . .	Quincy.
Sharon, . . . .	E. P. Fitts, . . . .	Mansfield.
Stoughton, . . . .	E. P. Fitts, . . . .	Mansfield.
Walpole, . . . .	J. R. Potter, . . . .	Walpole.
Weymouth, . . . .	I. M. Norcross, . . . .	East Weymouth.
<b>PLYMOUTH.</b>		
Abington, . . . .	W. H. Sanderson, . . . .	Bridgewater.
Bridgewater, . . . .	W. H. Sanderson, . . . .	Bridgewater.
Brockton, . . . .	B. B. Russell, . . . .	Brockton.
Duxbury, . . . .	Edwin H. Watson, . . . .	Marshfield Hill.
East Bridgewater, . . . .	R. W. McKeen, . . . .	East Bridgewater.
Hingham, . . . .	Louis P. Nash, . . . .	Hingham.
Kingston, . . . .	C. L. Read, . . . .	Kingston.
Marshfield, . . . .	Edwin H. Watson, . . . .	Marshfield Hill.
Middleborough, . . . .	W. T. Leonard, . . . .	Middleborough.
Plymouth, . . . .	Chas. Burton, . . . .	Plymouth.
Plympton, . . . .	F. W. Deusbury, . . . .	Plympton.
Rockland, . . . .	H. A. Halstead, . . . .	Rockland.
Scituate, . . . .	Edwin H. Watson, . . . .	Marshfield Hill.
West Bridgewater, . . . .	R. W. McKeen, . . . .	East Bridgewater.
<b>SUFFOLK.</b>		
Boston, . . . .	Edwin P. Seaver, . . . .	Boston.
Boston, . . . .	Ellis Peterson, . . . .	Boston.
Boston, . . . .	R. C. Metcalf, . . . .	Boston.
Boston, . . . .	John Kneeland, . . . .	Boston.
Boston, . . . .	G. H. Conley, . . . .	Boston.
Boston, . . . .	Mrs. L. P. Hopkins, . . . .	Boston.
Boston, . . . .	Geo. H. Martin, . . . .	Lynn.
Chelsea, . . . .	Eben H. Davis, . . . .	Chelsea.
Revere, . . . .	Milton K. Putney, . . . .	Revere.
Winthrop, . . . .	Milton K. Putney, . . . .	Revere.
<b>WORCESTER.</b>		
Ashburnham, . . . .	C. P. Hall, . . . .	Winchendon.
Barre, . . . .	M. H. Bowman, . . . .	Barre.
Berlin, . . . .	Geo. A. Mirick, . . . .	Northborough.
Blackstone, . . . .	Josiah P. Davis, . . . .	Millville.
Bolton, . . . .	J. A. Pitman, . . . .	West Boylston.
Boylston, . . . .	J. A. Pitman, . . . .	West Boylston.
Brookfield, . . . .	E. W. Howe, . . . .	Brookfield.
Clinton, . . . .	C. L. Hunt, . . . .	Clinton.
Douglas, . . . .	A. J. Curtis, . . . .	Uxbridge.



*Towns Employing School Superintendents, etc. — Concluded.*

BY COUNTIES.	Superintendent.	Residence.
WORCESTER — Concluded.		
Dudley, . . . . .	F. E. Sanborn, . . . . .	Oxford.
Fitchburg, . . . . .	Joseph G. Edgerly, . . . . .	Fitchburg.
Gardner, . . . . .	R. F. Colwell, . . . . .	Gardner.
Grafton, . . . . .	S. H. Holmes, . . . . .	Grafton.
Hardwick, . . . . .	M. H. Bowman, . . . . .	Barre.
Harvard, . . . . .	J. A. Pitman, . . . . .	West Boylston.
Holden, . . . . .	B. F. Robinson, . . . . .	Holden.
Hubbardston, . . . . .	E. J. Edmands, . . . . .	Baldwinville.
Lancaster, . . . . .	T. W. White, . . . . .	Westborough.
Leicester, . . . . .	B. F. Robinson, . . . . .	Holden.
Leominster, . . . . .	J. G. Thompson, . . . . .	Leominster.
Lunenburg, . . . . .	Geo. H. Knowlton, . . . . .	Princeton.
Mendon, . . . . .	Miss M. C. George, . . . . .	Mendon.
Millbury, . . . . .	F. E. Sanborn, . . . . .	Oxford.
Milford, . . . . .	S. F. Blodgett, . . . . .	Milford.
Northborough, . . . . .	George A. Mirick, . . . . .	Northborough.
Northbridge, . . . . .	S. A. Melcher, . . . . .	Whitinsville.
North Brookfield, . . . . .	E. W. Howe, . . . . .	Brookfield.
Oxford, . . . . .	F. E. Sanborn, . . . . .	Oxford.
Petersham, . . . . .	M. H. Bowman, . . . . .	Barre.
Phillipston, . . . . .	E. J. Edmands, . . . . .	Baldwinville.
Princeton, . . . . .	Geo. H. Knowlton, . . . . .	Princeton.
Royalston, . . . . .	E. J. Edmands, . . . . .	Baldwinville.
Shrewsbury, . . . . .	Geo. A. Mirick, . . . . .	Northborough.
Southborough, . . . . .	Geo. A. Mirick, . . . . .	Northborough.
Southbridge, . . . . .	John T. Clarke, . . . . .	Southbridge.
Spencer, . . . . .	Wyman C. Fickett, . . . . .	Spencer.
Sterling, . . . . .	Geo. H. Knowlton, . . . . .	Princeton.
Sturbridge, . . . . .	Edw. Dixon, . . . . .	West Brookfield.
Templeton, . . . . .	E. J. Edmands, . . . . .	Baldwinville.
Upton, . . . . .	S. H. Holmes, . . . . .	Grafton.
Uxbridge, . . . . .	A. J. Curtis, . . . . .	Uxbridge.
Warren, . . . . .	J. J. Buck, . . . . .	Warren.
Webster, . . . . .	D. P. Dame, . . . . .	Webster.
West Boylston, . . . . .	J. A. Pitman, . . . . .	West Boylston.
Westborough, . . . . .	T. W. White, . . . . .	Westborough.
Westminster, . . . . .	George H. Knowlton, . . . . .	Princeton.
West Brookfield, . . . . .	Edward Dixon, . . . . .	West Brookfield.
Winchendon, . . . . .	C. P. Hall, . . . . .	Winchendon.
Worcester, . . . . .	Albert P. Marble, . . . . .	Worcester.

*List of Superintendents for 1892, with their Superintendencies.*

Superintendent.	Residence.	Superintendency.
Abbott, Wm. W., . . .	Sheffield, . . . . .	Egremont, New Marlborough, Richmond, Sheffield, W. Stockbridge.
Aldrich, Geo. I., . . .	Newtonville, . . . . .	Newton.
Baldwin, Frank O., . .	Andover, . . . . .	Andover.
Balliet, Thomas M., . .	Springfield, . . . . .	Springfield.
Barker, Edward P., . .	Ayer, . . . . .	Ayer, Littleton, Pepperell.
Barker, Mrs. Susan M., .	Ayer, . . . . .	Shirlev.
Bartlett, Albert L., . .	Haverhill, . . . . .	Haverbill.
Bates, Wm. C., . . .	Lawrence, . . . . .	Lawrence.
Beckwith, W. P., . . .	Adams, . . . . .	Adams.

*List of Superintendents, etc. — Continued.*

Superintendent.	Residence.	Superintendency.
Billings, Sanford W., . .	Provincetown, . .	Eastham, Harwich, Provincetown, Wellfleet.
Blodgett, S. F., . . .	Milford, . . .	Milford.
Bowman, M. H., . . .	Barre, . . .	Barre, Hardwick, Petersham.
Boyden, O. F., . . .	Taunton, . . .	Taunton.
Brooks, H. S., . . .	Ashby, . . .	Ashby.
Bruce, O. B., . . .	Lynn, . . .	Lynn.
Buck, J. I., . . .	Warren, . . .	Warren.
Burton, Charles, . . .	Plymouth, . . .	Plymouth.
Chaffee, J. I., . . .	Rehoboth, . . .	Rehoboth, Seekonk, Swansea.
Chaffin, W. E., . . .	So. Dennis, . . .	Dennis, Yarmouth.
Channell, G. C., . . .	Melrose, . . .	Melrose.
Childs, J. B., . . .	Amherst, . . .	Amherst.
Clarke, John T., . . .	Southbridge, . . .	Southbridge.
Cogswell, Francis, . . .	Cambridge, . . .	Cambridge.
Collins, R. F., . . .	Gardner, . . .	Gardner.
Collins, O. W., . . .	So. Framingham, . . .	Framingham.
Connell, William, . . .	Fall River, . . .	Fall River.
Condon, R. J., . . .	Everett, . . .	Everett.
Conley, G. H., . . .	Boston, . . .	Boston.
Cox, Edward J., . . .	So. Sudbury, . . .	Sudbury.
Crittenden, Jerome, . . .	Tyringham, . . .	Tyringham.
Crocker, S. S., . . .	Head of Westport, . . .	Dartmouth, Westport.
Curtis, A. J., . . .	Uxbridge, . . .	Douglas, Uxbridge.
Curtiss, Elmer L., . . .	Sandwich, . . .	Bourne, Mashpee, Sandwich.
Dame, D. P., . . .	Webster, . . .	Webster.
Danforth, G. H., . . .	Westfield, . . .	Westfield.
Daniels, Chas. A., . . .	Malden, . . .	Malden.
Davidson, Herbert R., . . .	Pelham, . . .	Pelham.
Davis, Eben H., . . .	Chelsea, . . .	Chelsea.
Davis, Josiah P., . . .	Blackstone, . . .	Blackstone.
Day, B. C., . . .	Easthampton, . . .	Easthampton, Southampton, Westhampton.
Deensbury, F. W., . . .	Plympton, . . .	Plympton.
Dixon, Edward, . . .	West Brookfield, . . .	Acton, Sturbridge, West Brookfield.
Dutton, S. T., . . .	Brookline, . . .	Brookline.
Dwelle, Geo. R., . . .	Watertown, . . .	Watertown.
Eaton, Wm. L., . . .	Concord, . . .	Concord.
Edgerly, Joseph G., . . .	Fitchburg, . . .	Fitchburg.
Edmonds, E. J., . . .	Baldwinville, . . .	Hubbardston, Phillipston, Royalston, Templeton.
Edwards, A. M., . . .	Pittsfield, . . .	Pittsfield.
Fickett, Wyman C., . . .	Spencer, . . .	Spencer.
Fitts, Edward P., . . .	Mansfield, . . .	Mansfield, Sharon, Stoughton.
George, Miss M. C., . . .	Mendon, . . .	Mendon.
Gifford, John B., . . .	Marblehead, . . .	Manchester, Marblehead.
Goodhue, E. W., . . .	East Whately, . . .	Conway, Sunderland, Whately, Williamsburg.
Glover, H. N., . . .	Prescott, . . .	Prescott.
Hall, C. P., . . .	Winchendon, . . .	Ashburnham, Winchendon.
Hall, I. Freeman, . . .	Arlington, . . .	Belmont, Arlington.
Hallett, S. W., . . .	Hyannis, . . .	Barnstable.
Halstead, H. A., . . .	Rockland, . . .	Rockland.
Ham, James N., . . .	Lexington, . . .	Lexington.
Hatch, Wm. E., . . .	New Bedford, . . .	New Bedford.
Hobbs, W. E., . . .	North Attleborough, . . .	North Attleborough.
Holmes, S. H., . . .	Grafton, . . .	Grafton, Upton.
Hopkins, Mrs. Louisa P., . . .	Boston, . . .	Boston.
Horne, S. H., . . .	Braintree, . . .	Braintree.
Howe, E. W., . . .	Brookfield, . . .	Brookfield, North Brookfield.
Hunt, C. L., . . .	Clinton, . . .	Clinton.
Hunt, Ephriam, . . .	Medford, . . .	Medford, Winchester.
Hussey, Chas. E., . . .	Natick, . . .	Natick.

*List of Superintendents, etc. — Continued.*

Superintendent.	Residence.	Superintendency.
Ingalls, Earl, . . .	Dalton, . . .	Cheshire, Dalton, Lanesborough.
Kirtland, Edwin L., . .	Holyoke, . . .	Holyoke.
Kneeland, John, . . .	Roxbury, . . .	Boston.
Knowlton, Geo. H., . .	Princeton, . . .	Lunenburg, Princeton, Sterling, Westminster.
Knowlton, J. C., . . .	Tewksbury, . . .	Dracut, North Reading, Tewks- bury, Tyngsborough.
Lamberton, D. H., . .	Charlemont, . . .	Charlemont, Hawley, Heath, Mon- roe, Rowe.
Leonard, W. T., . . .	Middleborough, . .	Middleborough.
Lewis, A. T., . . .	Ashland, . . .	Ashland, Hopkinton.
Lull, H. W., . . .	Quincy, . . .	Quincy.
Lunt, Wm. P., . . .	Newburyport, . . .	Newburyport.
Maglathlin, Ed. B., . .	North Easton, . . .	Easton.
Marble, Albert P., . .	Worcester, . . .	Worcester.
Martin, Geo. H., . . .	Lynn, . . .	Boston.
Mason, Miss Lizzie A., .	Orange, . . .	Orange, Erving, Wendell.
McKeen, R. W., . . .	East Bridgewater, .	East Bridgewater, Raynham, West Bridgewater.
McKenney, L. T., . . .	Bedford, . . .	Bedford, Billerica, Burlington, Car- lisle, Lincoln, Wilmington.
Melcher, S. A., . . .	Whitinsville, . . .	Northbridge.
Meleney, Clarence E., .	Somerville, . . .	Somerville.
Metcalf, Robert C., . .	Boston, . . .	Boston.
Miner, Anson D., . . .	North Adams, . . .	North Adams.
Mirick, Geo. A., . . .	Northborough, . . .	Berlin, Northborough, Shrewsbury, Southborough.
Morss, C. H., . . .	Milton, . . .	Milton.
Moulton, J. S., . . .	Westford, . . .	Boxborough, Stow, Westford.
Mowry, Wm. A., . . .	Salem, . . .	Salem.
Myers, Hiram, . . .	Orleans, . . .	Orleans.
Nash, Louis P., . . .	Hingham, . . .	Cohasset, Hingham.
Norcross, I. M., . . .	East Weymouth, . .	Weymouth.
O'Brien, M. J., . . .	Norwood, . . .	Norwood.
Parlin, Frank E., . . .	Stockbridge, . . .	Stockbridge.
Pease, Alvin F., . . .	Northampton, . . .	Northampton.
Perkins, James S., . . .	Canton, . . .	Canton.
Perkins, R. H., . . .	Chicopee, . . .	Chicopee.
Peterson, Ellis, . . .	Boston, . . .	Boston.
Pitman, J. A., . . .	West Boylston, . . .	Bolton, Boylston, Harvard, West Boylston.
Potter, J. R., . . .	Walpole, . . .	Foxborough, Norfolk, Walpole.
Proctor, Mrs. J. C., . .	Warwick, . . .	Warwick.
Putney, Freeman, . . .	Gloucester, . . .	Gloucester.
Putney, Milton K., . . .	Revere, . . .	Revere, Winthrop.
Read, C. L., . . .	Kingston, . . .	Kingston.
Richardson, F. B., . . .	Woburn, . . .	Woburn.
Robinson, B. F., . . .	Holden, . . .	Holden, Leicester.
Roth, Henry B., . . .	Marlborough, . . .	Marlborough.
Russell, B. B., . . .	Brockton, . . .	Brockton.
Safford, A. L., . . .	Shelburne, . . .	Colrain, Buckland, Shelburne.
Sanborn, F. E., . . .	Oxford, . . .	Dudley, Millbury, Oxford.
Sanborn, N. W., . . .	Bellingham, . . .	Bellingham.
Sanderson, W. H., . . .	Bridgewater, . . .	Abington, Bridgewater.
Sears, Joseph E., . . .	Dighton, . . .	Dighton.
Seaver, Edwin P., . . .	Boston, . . .	Boston.
Smith, Metcalf J., . . .	Middlefield, . . .	Becket, Chester, Middlefield, Wash- ington.
Snow, Geo. F., . . .	North Chelmsford, .	Chelmsford.
Stearns, A. G., . . .	West Townsend, . .	Townsend.
Stevens, C. E., . . .	West Springfield, . .	West Springfield.
Stevens, F. J., . . .	Boxford, . . .	Boxford.
Sweet, F. W., . . .	Franklin, . . .	Franklin.
Thompson, J. G., . . .	Leominster, . . .	Leominster.

*List of Superintendents, etc. — Concluded.*

Superintendent.	Residence.	Superintendency.
Tenney, Fred. C., . . .	Holliston, . . . .	Holliston, Medway, Millis.
Tiffany, O. J., . . .	Attleborough, . . .	Attleborough.
Walker, T. A., . . .	Falmouth, . . . .	Falmouth.
Watson, Edwin H., . .	Marshfield Hill, . .	Duxbury, Marshfield, Scituate.
Wheeler, U. G., . . .	Agawam, . . . .	Agawam, Granville, Southwick.
Whitcomb, A. K., . .	Lowell, . . . .	Lowell.
White, T. W., . . .	Westborough, . . .	Lancaster, Westborough.
Whittemore, Henry, . .	Waltham, . . . .	Waltham.
Williams, O. S., . . .	Dedham, . . . .	Dedham.
Wood, Miss C. A., . .	Monson, . . . .	Brimfield, Monson.
Wood, Miss M. A., . .	Rockport, . . . .	Rockport.

## NORMAL SCHOOLS.

	STATISTICS FOR THE YEAR 1891-92.	
	Number of Students.	Number of Graduates.
Bridgewater, . . . . .	262	67
Framingham, . . . . .	159	50
Salem, . . . . .	260	77
Westfield, . . . . .	147	33
Worcester, . . . . .	181	36
Normal Art School, . . . . .	215	24
	1,224	287

There are now in the Commonwealth six State normal schools, established for the purpose of training teachers to teach in the public schools. The normal schools are now well provided with the means of communicating professional instruction. Except the Salem school, they have new and commodious school buildings, an ample supply of illustrative apparatus, the most approved means of physical training, and with one exception they have model or practice schools under the direction of the normal schools, in which the members of the normal schools may find an opportunity for observation and practice.

As a knowledge of the principles and method of teaching seems to be one thing, and skill in the application of principles quite another, it is necessary that ample opportunity be given in the training schools connected with the normal schools for practice in teaching by the normal students as they study the

principles. Such practice, if systematically and intelligently conducted during the normal course of instruction, will prepare the normal graduate to enter upon the practice of his profession with the advantages of experience.

If the standard for admission to the normal schools be raised, as the Board of Education now contemplates, they will be relieved of a large amount of academical work now required, and of many candidates whose limited knowledge and capacity for acquiring it make them improper subjects of professional training.

By the last returns it appears that the number of students in the normal schools is 1,224; the number of graduates for the same year, 1891-92, is 287. The number of teachers in the public schools May 1, 1892, who had attended normal schools, was 4,059, — increase for the year, 323; 3,267 of the 4,059 have completed the full course of normal instruction pursued in the normal schools.

The time has come when a professional training should be considered a requisite for teaching in the public schools of the Commonwealth.

### AGENTS OF THE BOARD.

<i>Agents.</i>	<i>Counties.</i>	<i>Districts.</i>
GEORGE A. WALTON, West Newton, .	Middlesex. } Barnstable. }	1
JOHN T. PRINCE, West Newton, . .	Norfolk. } Bristol. } Dukes. } Nantucket. }	2
A. W. EDSON, Worcester, . . .	Worcester. } Hampden. }	3
G. T. FLETCHER, Northampton, . .	Berkshire. } Franklin. } Hampshire. }	4
JAMES W. MACDONALD, Stoneham, .	Essex. } Suffolk. } Plymouth. }	5
HENRY T. BAILEY, North Scituate, . .	Commonwealth.	6
L. W. SARGENT, Assistant, Pittsfield, .	Western Counties.	



Mr. Martin was appointed agent of the Board of Education Sept. 1, 1882, and resigned his office Sept. 1, 1892. Mr. Martin was a graduate and afterward teacher of the normal school at Bridgewater. His normal school training as pupil and teacher prepared him for the proper inspection and examination of the public schools of the State. He was a generous critic, but fair in his criticisms, and ever ready to co-operate with school committees and teachers in conducting public instruction to the best results. Mr. Martin now holds the office of supervisor of the schools of Boston.

Mr. James W. MacDonald, principal of the high school at Stoneham, was appointed to fill the place made vacant by the resignation of Mr. Martin. He was known to be a good scholar, a progressive teacher, and thoroughly interested in everything pertaining to the improvement of the public schools. In his labors in the State Mr. MacDonald is giving special attention to the secondary schools. His successful experience in conducting for many years one of these institutions seems to have prepared him for his important work.

Mr. L. W. Sargent has been appointed assistant director of drawing for the western counties. The schools in this part of the Commonwealth have not generally introduced drawing into their course of studies. This is due in part to the nature of the subject, and in part to a want of preparation by the teachers to teach in a successful and intelligent manner the art to their pupils. The State Normal Art School has done much towards providing skilful teachers, but it still needs the directing power of an expert to interest the people and school boards, and to illustrate to teachers the best method of introducing the new subject of drawing into their schools.

The importance of the subject as an element in our courses of public school instruction is found in that drawing is the foundation of the industrial arts and the means of exciting to activity the powers of observation and imagination, and of cultivating the taste. Drawing is enumerated among the branches to be taught in all the public schools. The Board of Education has appointed two skilled persons, one the principal, the other an assistant, to direct the schools in the introduction of this branch of learning into their exercises.

More attention has been given by the agents the past year to

the teaching in the secondary schools. The examinations have shown that in many cases there are grave defects in the methods of teaching language, history, and the physical sciences. The schools themselves are aware of this fact, and are earnest for improvement.

The work of the agents is of increasing value, as it is better understood and more fully appreciated in the districts of the State to which they have been assigned.

JOHN W. DICKINSON,

*Secretary Board of Education.*

JAN. 20, 1893.



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FINANCIAL STATEMENT.

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## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION.

Dr.

APPROPRIATION FOR SUPPORT OF NORMAL SCHOOLS.

Cr.

1892.	1892.	1892.	1892.
Bridgewater Normal School:—			
Salary of principal, . . .	\$3,000 00	Appropriation, chapter 19, Acts of 1892,	\$91,881 00
Salaries of assistants, . . .	14,320 14	houses, . . .	5,100 00
Janitor, . . .	600 00	Appropriated by chapter 339, Acts of	600 00
Repairs, . . .	655 02	1892, . . .	
Watchman, . . .	600 00		
Fuel, . . .	1,455 55		
Printing, . . .	143 25		
Advertising, . . .	232 86		
Apparatus, . . .	232 14		
Model school, . . .	2,275 72		
Clerk, . . .	512 00		
Engineer, . . .	700 00		
Boarding hall, repairs and furniture, . . .	2,516 41		
Laboratory, . . .	91 90		
Physical training, . . .	53 40		
Books, . . .	192 15		
	\$27,580 54		
Framingham Normal School:—			
Salary of principal, . . .	\$3,000 00		
Salaries of assistants, . . .	11,381 00		
Janitor, . . .	730 00		
Repairs, . . .	1,004 46		
Fuel, . . .	1,004 25		
Printing, . . .	105 21		
Apparatus, . . .	202 92		
Books, . . .	290 01		
Advertising, . . .	81 92		
Light, . . .	95 97		



Water, . . . . .	44 87			
Stationery, . . . . .	30 55			
Watchman, . . . . .	647 90			
Telephone, . . . . .	104 49			
Boarding hall, clerk and expenses, . . . . .	636 73	19,360 28		
<b>Salem Normal School:—</b>				
Salary of principal, . . . . .	\$3,060 00			
Salaries of assistants, . . . . .	10,023 50			
Janitor, . . . . .	600 00			
Repairs, . . . . .	465 21			
Fuel, . . . . .	412 75			
Stationery, . . . . .	24 43			
Books, . . . . .	134 83			
Advertising, . . . . .	52 88			
Printing, . . . . .	85 50			
Water, . . . . .	49 50			
Gas, . . . . .	7 36			
Apparatus, . . . . .	264 14			
Lectures, . . . . .	20 00	15,140 10		
<b>Westfield Normal School:—</b>				
Salary of principal, . . . . .	\$3,000 00			
Salaries of assistants, . . . . .	9,933 29			
Janitor, . . . . .	638 88			
Repairs, . . . . .	1,721 59			
Watchman, . . . . .	438 49			
Stationery, . . . . .	338 27			
Apparatus, . . . . .	1,054 61			
Fuel, . . . . .	120 00			
<i>Amounts carried forward, . . . . .</i>	\$17,245 13	\$34,500 38	<i>Amount carried forward, . . . . .</i>	\$97,581 00

## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONTINUED.

Dr. Cr.  
 APPROPRIATION FOR SUPPORT OF NORMAL SCHOOLS — *Concluded.*

1892.	Amounts brought forward, .	\$17,245 13	\$34,500 38	1892.	Amount brought forward, .	\$97,581 00
	Westfield Normal School — Con.					
	Advertising, . . . . .	189 02				
	Gas, . . . . .	80 88				
	Binding, . . . . .	68 55				
	Printing, . . . . .	249 75				
	Water, . . . . .	155 00				
	Books, . . . . .	632 74				
	Boarding hall, . . . . .	999 91				
	Dedicatory address, . . . . .	30 00	19,650 98			
	Worcester Normal School : —					
	Salary of principal, . . . . .	\$3,000 00				
	Salaries of assistant, . . . . .	7,933 12				
	Janitor, . . . . .	600 00				
	Repairs, . . . . .	1,535 62				
	Fuel, . . . . .	772 49				
	Stationery, . . . . .	248 72				
	Binding, . . . . .	33 45				
	Printing, . . . . .	448 25				
	Advertising, . . . . .	47 75				
	Telephone, . . . . .	51 24				
	Water, . . . . .	79 35				
	Apparatus, . . . . .	348 60				
	Books, . . . . .	146 24				
	Music, . . . . .	52 13				
	Physical training, . . . . .	43 00	15,399 96			
			449 14			
			<u>\$97,581 00</u>			
Dec. 31,	Balance unexpended, . . . . .	.				\$97,581 00

## APPROPRIATION FOR NORMAL ART SCHOOL.

1892.		1892.	Appropriated by chapter 19, Acts of 1892,	1892.
	Salaries of principals, . . .	\$3,000 00		
	Salaries of assistants, . . .	12,415 15		
	Janitor, . . .	975 06		
	Repairs, . . .	12 44		
	Fuel, . . .	1,086 98		
	Electric light, . . .	111 80		
	Gas, . . .	44 46		
	Gymnastics, . . .	375 00		
	Water, . . .	50 65		
	Printing, . . .	138 75		
	Advertising, . . .	123 02		
		\$18,333 31		
		26 69		
		\$18,360 00		
Dec. 31,	Balance unexpended, . . .	.		\$18,360 00

## APPROPRIATIONS FOR AID TO NORMAL PUPILS.

1892.		1892.	Appropriated by chapter 19, Acts of 1892,	1892.
June 18,	Amount paid :—			
	Bridgewater school, . . .	\$508 20		
	Framingham school, . . .	114 60		
	Salem school, . . .	492 00		
	Westfield school, . . .	787 00		
	Worcester school, . . .	98 20		
		\$2,000 00		
		2,000 00		
		\$4,000 00		
Dec. 31,	Balance unexpended, . . .	.		\$4,000 00



## APPROPRIATION FOR TEACHERS' INSTITUTES.

1892.	Expend for instructors and expenses of institutes at Ashburnham, Barnstable, Bellingham, Bourne, Cambridge, Charlemon, Chester, Clinton, Dalton, Freetown, Hubbards-ton, Maynard, Monterey, New Salem, Northampton, North Attleborough, Palmer, Petersham, Townsend, Uxbridge, Walpole, Webster, Westborough, Wilbraham, Woburn, . . . .	1892.	Appropriated by chapter 19, Acts of 1892,
Dec. 31,	\$1,222 96 777 04 Balance unexpended, . . . .	\$2,000 00	\$2,000 00

## APPROPRIATION FOR INCIDENTAL EXPENSES.

1892.	School registers and printing, . Messenger and expressage, . Stationery and postage, . Preparation of statistics, . Telegrams, . . . . .	1892.	Appropriated by chapter 19, Acts of 1892,
Dec. 31,	\$425 21 448 50 197 72 125 00 2 34 Balance unexpended, . . . .	\$1,198 77 1 23 \$1,200 00	\$1,200 00



## FINANCIAL STATEMENT OF THE BOARD OF EDUCATION — CONCLUDED,

Dr.	APPROPRIATION FOR TRAVELLING EXPENSES OF MEMBERS OF THE BOARD.				CR.
	1892.	Amounts paid as follows: —	1892.	Appropriated by chapter 19, Acts of 1892,	
April 5,		George I. Aldrich, . . .	\$28 35		
June 8,		A. P. Stone, . . .	74 72		
30,		Kate Gannett Wells, . . .	38 67		
July 6,		Alice Freeman Palmer, . . .	29 60		
Dec. 2,		George I. Aldrich, . . .	24 35		
22,		M. B. Whitney, . . .	90 78		
		E. B. Stoddard, . . .	52 00		
		E. H. Capen, . . .	10 65		
24,		Kate Gannett Wells, . . .	12 24		
		A. P. Stone, . . .	52 98		
		A. A. Miner, . . .	9 08		
			\$423 42		
31,		Balance unexpended, . . .	176 58		
			\$600 00		\$600 00

C. B. TILLINGHAST, *Treasurer.*

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# APPENDIXES.

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A.

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REPORT OF GEORGE A. WALTON,

AGENT OF THE BOARD.

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# REPORT.

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*To the Board of Education.*

The portion of the State designated as my particular province for inspection is the counties of Barnstable and Middlesex. During the year I have conducted teachers' institutes in these counties, attended teachers' conventions, inspected schools, and held meetings for the purpose of stimulating and instructing the teachers and people. Some of the meetings were called for a special purpose, as the dedication of a school-house or the advocacy of the plan of supervision by superintendents. Though I have endeavored to meet all special calls for service, my visits to the schools have been limited by the demands made upon my time in the office of the secretary, where the first and last part of the year were occupied in preparing the summary and making the analysis of the abstract of school statistics, in obtaining returns of the private schools of the State, after the plan of the previous two years, and in sundry services incident to the publication of the school laws, a course of studies and the annual reports.

## INSTITUTES.

The report of the secretary contains a detailed account of the institutes. Of these, the two held in Barnstable County were attended by the teachers of all the towns but two in the county. The four held in Middlesex were attended by the teachers of all the towns invited, twenty-four towns being represented. Two of the six institutes were conducted as a single class, the other four in part of the exercises as a single class, and in part in three sections, — primary, grammar and high school. The plan of instruction is the same, whether the institute is conducted in sections or as a single class, the general purpose being to illustrate the principles upon which all teaching de-

pend, and show a method of teaching applicable to the several branches taught in the schools. The advantage of forming sections consists in using illustrations taken from the particular grade of work pursued by the teachers comprising the several sections. The section plan, where the institute has many members, with any considerable number of teachers of the different grades, gives the best results, and uniformly meets with the approval of teachers.

The program of exercises for this year was arranged somewhat with reference to the newly awakened interest everywhere felt in the pursuit of nature studies. Accordingly two exercises were given during the day in these studies, and two in drawing with reference to the manner of illustrating them. The institutes were cordially entertained by the citizens in the towns where held, and highly commended by those who witnessed their exercises.

#### TRUANT SCHOOLS.

There is a large and increasing number of truants in these counties, owing to the laxity with which the laws are enforced. In neither county is adequate provision made for the restraint, discipline and instruction of this class of children. Barnstable County is authorized by law to unite with Norfolk, Bristol and Plymouth in maintaining a truant school. Though one is established at Walpole, by the other counties, it is not accepted by the commissioners of Barnstable as their county truant school. Such acceptance should not be longer delayed. The Legislature of 1892 authorized the county commissioners of Middlesex to borrow fifty thousand dollars for the erection of a truant school for that county. Progress is making by the commissioners towards the establishment of a school in the north part of the county. It is proposed to expend twenty-five thousand dollars for this purpose, of which six thousand has already been applied to the purchase of a twenty-acre lot in the town of Chelmsford, near the boundary line of Lowell. This will necessitate the erection of a second building at an early date. A tithe of the vigilance shown by our county officials in providing an abode for criminals, applied to a good truant school for saving the youth of the county from

becoming criminals, would have given Middlesex this much-needed institution long ere this.

### THE SCHOOLS.

In earlier times the most noticeable characteristic of the schools as a whole in different towns, and of the different schools in the same town, was their contrasts in merit as the result of their different modes of instruction and management. In recent times these differences are less marked, and the results as regards the excellence of the schools more nearly uniform. The primary cause for the greater uniformity and for the improved condition of the schools is the increase of population and its concentration in cities and villages. This has led to having larger schools, and to a form of organization which is more economical, and which gives greater efficiency to the instruction.

*Teachers.* — The teaching force is improved both in knowledge of what should be taught and in skill to teach. But still the schools are subject to serious loss from defects in teachers in both these respects. Large numbers of them have not the requisite knowledge of the branches to be taught or of the true principles of teaching, nor have they the skill necessary to successfully practise the art. Of the teachers employed in Middlesex County, but twenty-eight per cent. are graduates of normal schools; but forty per cent. have attended them for any length of time; if we add to this number ten per cent. additional who may have attended training schools, or had some instruction in training classes, there will remain one-half of the teachers who have given no attention to preparing for their professional work. With Barnstable County the case is much worse; here but twenty-one per cent. are normal graduates, and but twenty-five per cent. have spent any time in normal schools; and it is fair to assume that two-thirds of the teachers of that county were wholly untrained before entering upon teaching. Such gains as are making in the schools, then, exist in spite of a large percentage of inexperienced and untrained teachers found in them, and result largely from the natural tact and ability possessed by the mass of the teachers, rather than from skill acquired under training. Of course this implies school keeping rather than teaching. While there is

much that is excellent of the former, I see but little attempted of the latter.

*Studies.* — Some things that were useless in the old branches of study have been eliminated, and the call is more fully met in recent years for thoroughness in essentials and for an enlargement of the course in some directions; so that now, for example, in some cities and towns in Middlesex the hitherto all-engrossing study of arithmetic is restricted to a knowledge of the four fundamental operations and facility in performing them, with integral, fractional and compound numbers, and to applying these operations to problems in percentage and mensuration. The extraction of the square and cube roots have not been required to be taught in the grammar schools of Cambridge for many years. In this city and in most if not all the cities, and in a large number of towns, the course of studies is extended to embrace nature studies, with elementary physics, manual training, gymnastics, — the Ling system is favored. Some towns, as Watertown, Winchester and Stoneham, are trying the experiment of teaching algebra and geometry in grammar grades. It is proposed in Watertown to provide for these grades instruction in French, German and Latin languages. Drawing and music are taught in the great majority of the towns, and physiology is now pursued in all the schools as a regular branch. Kindergarten instruction at public expense is reaching down below the age of five years and fitting the children to enter, with well-formed habits, the primary grades.

*Grading.* — The practice of grading the schools more than any other means employed for their improvement has affected them favorably. To facilitate this, a number of small schools have been discontinued, the children being brought together in large central schools. Following the example set by Concord ten or twelve years ago, the towns of Bedford, Lexington and Maynard have erected new buildings and concentrated their schools. Mashpee also, a town in Barnstable County; consisting chiefly of the remnants of the tribe of Mashpee Indians, has reduced her three schools to one school with two departments, and erected for its accommodation a school-house in the north part of the town, at a cost of \$3,500. To this the children remote from the school are transported at public expense.



The result is not alone the grading of the schools, but there is a saving per month of twenty dollars in money. The places named are notable examples of a general tendency among the towns to have better grading, and to give up the little neighborhood schools to secure this end.

Under the system of grading, larger numbers can be trained and taught together; fewer teachers are required and a superior class can be employed; the school term can be prolonged; and the interest of the pupils in school and in other relations is improved by their more extended associations. It is found that, with consolidation and the consequent better grading, the regularity of attendance improves. The effect in Bedford is an increase both in the average whole number attending and in the regularity of attendance. Presumably the same is true of all the towns under the plan of consolidation.

The morals of the children are improved by the more constant oversight possible, where the more skilful, experienced, better-trained and more permanent teachers are employed, as in the graded schools.

The supervision of the schools under the plan of consolidation is both more easy and more effective.

*Superintendents.* — The system of supervision by superintendents, which was early introduced into the cities of Middlesex, and which in the past three years has extended to the towns, is exerting a large influence in unifying and improving the school work. At present forty-four of the fifty-four towns in Middlesex County, and twelve of the fifteen in Barnstable, are employing superintendents. Eight of these first adopted this form of supervision the present year. In Barnstable eighty-seven per cent. and in Middlesex ninety-three per cent. of all the school children are under it, and in nearly all of the towns of these counties the supervision is something more than nominal, — it is by persons who may be considered in a sense professional, that is, who are, or have been, experienced and successful teachers, who make superintending their occupation, and who are liberally paid for the service. In other towns the service of an individual member of the school committee is so intelligently given to the schools as to secure to them the best results of supervision possible under the school-committee system.

The superintendent largely affects the schools by assisting the committee to provide those means and causes which make them what they are. He knows better than they the need for suitable apparatus, devices, books of reference, etc. He knows where these can be obtained and where used to the best advantage. The superintendent, being a constant student of the problems of education, can arrange and adjust courses of studies better than can the school committee. His influence is felt through the varied relations he sustains to the people, especially to the parents. He more directly affects the schools by advising in the choice of teachers, and by his constant oversight of their work; in the inspiration he communicates by his sympathy and advice, as well as by stated meetings for the discussion of educational topics. This he does also by directing the teachers' reading and studies, and by his presence in the class room. His most potent influence is exerted in the relation he sustains as teacher of the teachers.

He also directly affects the schools through his relations with the children. His presence in the school-room should be benign and stimulating to both them and their teachers. This should follow from the reasonableness of the tests he applies and the hopeful spirit which animates him in all his intercourse with them, whether within the school or without. The superintendents as a class sustain a most intelligent bearing towards the schools and the people.

*Promotions.* — Notwithstanding the advance apparent in the schools, there yet remains much to be done to bring them into a state of the greatest efficiency; in fact, the problem of how to do this is yet unsolved, and, with the means we can at present command, it will remain a problem without solution. The grading of the schools is a step in the right direction; but, even with this accomplished, there remain the questions of examinations and promotions. While examinations in some form are everywhere retained, the constant tendency is to restrict their influence in determining promotions from grade to grade, and to rely finally more upon the superintendent's and teacher's judgment, formed from a knowledge of the pupil's daily work. In Cambridge, Malden, Newton and other places, plans have been devised and are in operation which provide for special promotions at other than the usual and stated periods.



Cambridge makes provision for two classes advancing at different rates in the same grade. This avoids the evil complained of under the graded system of pushing the slow and plodding pupils on the one hand, and of retarding the bright and ambitious ones on the other. Under this plan ten per cent. of the pupils, sometimes a larger number, are promoted before the average of their class, with the result that a nine-years course of studies is completed in eight years or in a less time, and that the average age of graduates from the grammar schools is materially lessened.

#### UNGRADED COUNTRY SCHOOLS.

The towns in Middlesex County, most or many of whose schools are mixed so far as any exact grading is concerned, number twenty-two. These contain 6.8 per cent. of the school population, and 13 per cent. of the schools of the county. The towns in Barnstable whose schools are of this character number seven, and contain 35 per cent. of the schools and the same ratio of the school population.

Tests applied in these schools show results in the essentials of a practical elementary education much below those reached in carefully graded city schools. What means can be used to increase their efficiency and make the one the equal of the other? This may be done by an appropriate form of grading, and by substituting for the oral drill by the teacher, which so largely occupies the time of the city graded school, written work and study by the pupils.

Grading is of two kinds: the first places together all the pupils of nearly equal attainments, teaching them together, requiring them to pursue the same branches and the same topics of study at the same time, and to move forward in a body at definite periods of time. This is called close grading. The other kind consists in making a complete classification, based upon the pupils' attainments in the several branches of study, but placing different members of a grade, in classes outside their own grade to pursue special branches. This is termed loose grading. Under it the element of time for beginning or completing a study or a course of studies bears little relation to the pupil's progress; his fitness for advancement determines the time of his going.

The problem of school grading would be solved if, instead of making knowledge the supreme end of education, development were made the end, and the grading based upon that.

Did grading upon development admit of complete practical application, all the difficulties of promotion would be removed. At certain periods of development children in normal conditions, having completed prescribed courses of studies under competent instructors, would pass as a matter of course to the next grade of studies.

Such a scheme will strike many as purely theoretical; but under some of the best supervised of the city systems it is nearly realized.

The distrust of written examinations as a basis for promotion, the entire abandonment of them for this purpose by some, show that our schools are all drifting that way, and this must be the inevitable result of introducing the new branches now being attempted in the schools. With knowledge as the end, they are altogether too numerous to be pursued and completed in the time allowed. There is time if they be pursued mainly as disciplinary studies.

But for what are the exercises of gymnastics, military drill, manual training, industrial drawing, nature studies, singing, kindergarten work and molding in the schools except for discipline? Why is the child required to be punctual and constant in attendance, why to be industrious, neat in his work and personal appearance, orderly, courteous, quiet, obedient, well-behaved, but that he may be developed into self-control through these habits formed in the school?

Development is the end of all school work, so recognized by every pedagogical writer and speaker; the grading is for the purpose of facilitating this, as well as for distributing the studies. So, though the grading is marked off by periods of time in which certain branches of knowledge are to be learned and topics of study pursued, the teacher must remember that there is a higher end, and in all his teaching teach with that end in mind. With this constantly in view, he may be sure the knowledge gained will be greater in amount and better in kind than if he has his mind simply upon the knowledge to be acquired. With this prevision we suggest a four-grade program for country schools.

*Program for Country Schools.*

Hour.	Time (Min.)	GRADE I.	GRADE II.	GRADE III.	GRADE IV.
9.00	10	Opening exercises — singing, etc.	Opening exercises — singing, etc.	Opening exercises — singing, etc.	Opening exercises — singing, etc.
9.10	25	Copying from black-board.	Slate work.	Constructive geometry.	Arithmetic.
9.35	10	<b>Reading.</b>	Reading.	Reading.	Arithmetic.
9.45	10	Copying words or sentences read, on black-board or slate.	Reading.	<b>Constructive geometry.</b>	
9.55	15	Manual exercises at table, — sticks, blocks, etc.	<b>Reading or declamation.</b>	Reading or declamation.	Reading or declamation.
10.10	15	Modelling in clay or sand.	Letter writing.	<b>Reading.</b>	<b>Reading and literature.</b>
10.25	20	<b>Drawing from objects.</b>	Map drawing.	<b>Drawing.</b>	<b>Drawing.</b>
10.45	15	Recess.	Recess.	Recess.	Recess.
11.00	10	<b>Numbers.</b>	Arithmetic.	Arithmetic.	History or geography (alt.).
11.10	15	Number work from black-board.	<b>Arithmetic.</b>	<b>Arithmetic.</b>	History or geography (alt.).
11.25	20	Recreation or slate work (stringing beads, sewing, etc.).	Slate work in numbers.		Chart or map drawing.
11.45	15	Kindergarten, or dismissed.	Language.	Language.	<b>History or geography (alt.).</b>
12.00	60	Noon recess.	Noon recess.	Noon recess.	Noon recess.
1.00	20	Copying from black-board.	Language.	Language.	Physiology or botany (alt.).
1.20	20	<b>Talking and reading</b> (nature studies — form, color).	Geography.	Geography.	Grammar.
1.40	20	Slate or black-board work.	<b>Writing.</b>	<b>Writing.</b>	Composition.
2.00	20	<b>Writing.</b>	Gymnastics or recess.	Gymnastics or recess.	<b>Writing.</b>
2.20	15	Gymnastics or recess.	Spelling.	Spelling or physiology (alt.).	Gymnastics or recess.
2.35	15	<b>Talking and reading</b> (morals and manners).	Silent reading.	Composition or physiology (alt.).	Arithmetic or reading.
2.50	15	Black-board or slate work.	Drawing.	<b>Physiology and nature studies (alt.).</b>	<b>Grammar.</b>
3.05	25	Busy work or sewing.		General exercise.	<b>Physiology and nature studies (alt.).</b>
3.30	10	General exercise.	<b>Written spelling, drill in fundamental operations (alt.).</b>	<b>Written spelling, drill in fundamental operations (alt.).</b>	General exercise.
3.40	20	Dismissed.	Dismissed.	Dismissed.	<b>Written spelling, drill in fundamental operations (alt.).</b>
4.00					Dismissed.

NOTE. — Full-face type in the program denotes recitation.

*Working the School under the Program.*—Close grading is subject to serious evils if rigidly followed ; as frequently applied in city schools, there are objections to it on the ground that it leads to routine and formality, that the teacher does too much of the work and the pupils too little, and for the country school close grading is out of the question, loose grading is the only practicable form. The school can be worked in classes, but this is the most that can be done.

In teaching the course assigned to a period or grade, first teach the principles and the essentials of a branch, then review, make applications and amplify ; if the period is six months, do the former work in the first three, the latter in the last three, months. If at the end of the first period a pupil seems equal to it, encourage him, help him, make him pass to the next grade. It is even more easy to do this in country than in city schools. For those who enter late and need to make up lost time, this is their right. It is the right of all.

Regular promotions, all promotions, should be based upon the ability of the pupil to do the next grade work. Has he the development? Has he the essentials of knowledge? Can he advance with benefit to himself and without serious detriment to the class? are questions to ask ; if the answer is “yes,” give him his passport with a God-speed. Nobody can answer these questions so well as the teacher. He should keep a record, weekly or monthly, of the pupils’ application and achievements,—this by estimate. His opinion may be formed more definitely by reference to this. If he lack courage, or is too full of the mother spirit, let the judgment of the superintendent be put into the scales with or against that of the teacher. To assist and assure both, and to satisfy patrons and pupils, a special examination in essential branches is a wise provision.

*Record of School Work.*—To keep the superintendent informed of the pupils’ progress, a record should be required of the work of each term or month in all schools having many classes, and especially where, as in the country schools, a frequent change of teachers is likely to occur. The following is the form required in the schools of Dracut and the other towns of the district superintended by Mr. J. C. Knowlton, who kindly provides the sample : —

*Report of Work in Grammar Grades, School No. 5, Town of Dracut,  
for Term ending Dec. 1, 1892.*

*Teacher.*

CLASS.	SUBJECT.	WORK.
<i>Fourth.</i>		
P. B.,	Language,	Business letters, complex sentences
A. C.,	Arithmetic,	Banking, review, carpeting.
G. C.,	Reading,	Longfellow's Evangeline, Part I.
L. P.,	Spelling,	Worcester's Speller, page 161; words selected from geography, history and written exercises.
	Writing,	Harper's Copy-book No. 4, page 23.
	Geography,	Nichols' Topics, Grade VIII., Topic 5, lakes of Europe.
	History,	Washington's Administration, political parties.
<i>Third.</i>		
F. B.,	Language,	Business letters, conjugation of verb.
*W. C.,	Arithmetic,	Commission, review fractions.
†R. L.,†	Reading,	Information Readers, "Dangers Below" completed.
†G. B.,§	Spelling,	Worcester's Speller, page 120; words selected from geography, history and written exercises.
†G. D.,§		
†S. W.,*	Writing,	Harper's Copy-book No. 4, page 23.
†E. M.,		
	Geography,	Nichols' Topics, Grade VI., Topic 7, climate M. A. States.
	History,	King George's war, taking Louisburg.
<i>Second.</i>		
P. C.,	Language,	With third class.
D. E.,	Arithmetic,	Compound numbers; reducing from lower to higher denominations; practical work on surfaces.
¶T. R.,	Reading,	With third class.
**J. B.,		
**M. C.,	Spelling,	With third class.
O. K.,	Writing,	With third class.
M. M.,	Geography,	With third class.
P. H.,	History,	Reading Eggleston's First Book in American History; revolutionary war.
L. O'M.,		
K. Q.,		
A. S.,		
<i>First.</i>		
A. B.,	Language,	Letter writing.
J. C.,	Arithmetic,	Multiplication of fractions, whole numbers by mixed numbers.
J. C.,	Reading,	Franklin Fourth Reader.
A. C.,	Spelling,	Worcester's Speller, page 100; words selected from geography and written exercises.
A. G.,	Writing,	Harper's Copy-book No. 3, page 2.
L. K.,		
M. L.,	Geography,	Nichols' Topics, Grade V., Topic 3, surface of eastern hemisphere.
E. M.,	History,	Reading Eggleston's First Book in American History.
M. P.,		

\* With second class in reading.

† With fourth class in spelling.

‡ With fourth class in history.

§ With fourth class in reading.

|| Second division Information Reader.

¶ Reviewing fractions with first class.

\*\* With fourth class in writing.



Taking into account the disadvantages with some advantages possessed by the country schools, under proper organization and administration their graduates ought to hold equal rank with those from closely graded schools, and this they do under skilful supervision and instruction.

#### PRIVATE SCHOOLS.

An attempt has been made for the past three years to obtain complete statistical returns of the private schools throughout the State. One year ago the large amount of time given to securing these statistics was rewarded by returns from 383 of the 429 schools to which blanks were sent. The fifty-fifth annual report of the secretary contains the tabulated results; the analysis of these was published in my report in the same volume.

A number of the schools were dropped from the list the present year; some because they are special or professional in their character, others because their membership is temporary, as is the case in home schools and asylums. Twenty or thirty schools are reported as discontinued, and about the same number have been established during the year.

Less time was given this year to collecting statistics, consequently fewer returns were secured.

Retaining the classification adopted the past year, and entering for the schools that made no returns the present year the returns of last year, we give on the following page an abstract of returns of membership in the private schools for the year ending May 1, 1892.

The kindergartens, including private schools having kindergarten departments, show an increase for the year of 17; the increase in the number of pupils is 332.

The number of parochial schools remains about the same, with an increased membership of 1,916. My reports for the two successive years, however, show a falling off of 12 in the number of schools. An error was made last year by classing as parochial schools a number of asylums and private denominational schools.



*Table showing the Membership of the Private Schools for the Year 1891-92.*

CLASS OF SCHOOLS. 1891-92.	Number of Private Schools.	MEMBERSHIP.			
		Number of Pupils of All Ages in the Schools dur- ing the Year.	Number attend- ing under Five Years of Age.	Number Attend- ing over Fifteen Years of Age.	Number Attend- ing between Five and Fifteen Years of Age.
Kindergartens, and private schools having kinder- garten departments, .	70	1,330	329	76	925
Private schools other than kindergartens and paro- chial schools, . . .	261	16,421	128	8,754	7,539
Parochial schools, . . .	91	48,075	485	2,041	45,549
	422	65,826	942	10,871	54,013
Schools for special classes of persons, . . .	23	4,264	55	1,176	3,033

*Summary.*

*Schools.*

Number of private schools, . . . . .	422
Number of schools returned, . . . . .	341

*Membership.*

Number of pupils of all ages attending the private schools during the year, . . . . .	65,826
Number of children under five years of age, . . . . .	942
Number of pupils over fifteen years of age, . . . . .	10,871
Number of pupils between five and fifteen years of age, . . . . .	54,013

There is a net loss of 12 in the number of private schools other than kindergartens and parochial schools, with a gain of 1,009 in the membership.

In estimating the increase of attendance upon the last-named class of private schools it should be noted that there are included in it 6 schools which furnish high-school instruction free to the pupils where they are located; 15 are private denominational schools; 5 are schools of languages and oratory, and 10 are commercial schools. The total membership of

these 36 schools is 6,510. A large proportion of their members are adults, and nearly all have passed the school age. If we deduct this number from the total number attending all private schools other than kindergartens and parochials, there remain in attendance upon this class of private schools 9,911 pupils, of whom about 2,000 are over fifteen years of age.

The classes of private schools that are making a gain in their membership are the kindergartens and parochial schools. The latter absorb a large fraction of the natural increase of children of school age.

The schools for special classes of children include those connected with public institutions, and those that have a special purpose, as industrial training; some of the latter are now for the first time reported.

Considering the difficulty of obtaining satisfactory returns of the private schools, I venture to repeat two suggestions made in my report of last year:—

1. Every private school should be required to keep certain prescribed records. A register should be furnished them as for public schools.

2. One form of statistics should be sent by the private schools to the school committee or other town or city officials; this form, or an abstract of it, should be sent to the State authorities, and by these authorities to the department of education of the general government.

Respectfully submitted,

GEORGE A. WALTON.

WEST NEWTON, Dec. 31, 1892.

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B.

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REPORT OF JOHN T. PRINCE,

AGENT OF THE BOARD.

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# REPORT.

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*To the Board of Education.*

In previous reports I have dwelt mainly upon the work of primary and grammar schools. In this report I desire to present somewhat in detail some results of my observation of the high schools of Bristol and Norfolk counties, all of which I have recently visited.

For convenience of reference I shall designate those schools which are required to be maintained in towns containing four thousand inhabitants as first-grade high schools, and those schools which are required to be maintained in towns containing five hundred families as high schools of the second grade. Other schools which have high school studies, but which are not maintained to the standard of the second-grade high schools, I shall designate as high schools of the third grade.

## NUMBER AND KIND.

There are in the two counties at present thirty-four high schools, two towns — Weymouth and Wrentham — each having two schools. Of this number twenty are schools of the first grade, six are schools of the second grade and eight are schools of the third grade. It is an interesting fact to note that five of the towns reported as having a first-grade high school are not obliged by law to maintain such a school, and that four of the towns which have a high school are not under legal obligation to maintain one.

## COURSES OF STUDY.

Four plans are pursued in the courses of study, viz. : —

1. A single course with no electives ; that is, every pupil is expected to take all the subjects of the course in the allotted time. Only three or four of the smallest schools have adopted this plan.

2. A single course with electives. In this plan the evident purpose is to present a few studies which must be pursued by all, together with one or two studies which the pupils may carry on if they choose. Sometimes the alternative is between two studies, one of which must be taken. Only a few schools, and those of the second and third grades, follow this plan.

3. Two or more courses with no electives. In only a few schools is this plan followed. Where several courses are given, as is done in Fall River, the conditions are the same as if many electives were offered.

4. Two or more courses with electives, — a plan which is followed quite generally in all schools of the first grade and in some of the second.

The following tables show in detail the distribution of subjects in the various courses. The courses followed at present are differently named, no less than twelve different names being used, viz., “Classical,” “Latin,” “English,” “Latin-English,” “College,” “College Preparatory,” “General,” “Regular,” “Business,” “Institute,” “Latin Scientific,” “Commercial.”

To properly tabulate the time given to each subject of a course, I have designated the course in which Greek is required as *Course A*; the course in which Latin and French or Latin and German are required, but no Greek, as *Course B*; the course in which one foreign language alone is required as *Course C*; and the course in which only English is required as *Course D*. The subjects are classified under four heads, — mathematics, science, history and language, book-keeping being classed with mathematics and civil polity with history. To give a basis for comparison, the subjects of the nine-months courses are reduced to a ten-months standard. Music, drawing and physical exercise are not given.



*Course A.*

NAME OF TOWN OR CITY.	Year of Course.	NUMBER OF RECITATIONS YEARLY.							
		Mathe- matics.	Science.	His- tory.	LANGUAGE AND LITERATURE.				
					Eng- lish.	Latin.	Greek.	French.	Ger- man.
Needham, . . .	1	200	200	—	—	200	—	—	—
	2	200	—	100	—	160	160	—	—
	3	—	—	—	120	160	160	160*	—
	4	—	160	—	120	160	160	160*	—
New Bedford, . .	1	160	—	—	200	160	—	—	—
	2	160	—	—	200	160	200†	—	—
	3	—	200†	—	240	160	200†	160*	—
	4	—	—	160	240	160	200†	160*	—
Holbrook, . . .	1	160	—	160	—	160	—	—	—
	2	160	—	—	—	160	160	—	—
	3	160	—	—	—	160	160	—	—
	4	160	—	—	120	160	160	—	—
Weymouth, . . .	1	160	—	—	160	160	—	—	—
	2	112	48	—	160†	160	160	—	—
	3	48	112	—	40	160	160	120	—
	4	—	—	—	120	160	160	80	—
Attleborough, . .	1	160	160	120	120	160	—	—	—
	2	160	160	—	180	200	160	—	—
	3	—	160	—	80	200	160	—	—
	4	80	—	160	80	160	200	—	—
Brookline, . . .	1	100	20	—	100	140	—	*160†	—
	2	60	—	100	100†	120	100	*160†	—
	3	60	160†	—	100†	120	160	*120†	—
	4	—	—	100	100	160	160	*120†	—
North Attleborough,	1	160	53	—	186	200	—	—	—
	2	160	—	—	80	160	160	—	—
	3	—	—	160	80	160	160	—	—
	4	160	—	—	80	160	160	—	—
Dedham, . . .	1	240	80	80	80	160	—	—	—
	2	120	—	—	40	160	160	120	—
	3	160	—	—	80	160	160	120	—
	4	—	80	80	80	160	160	120	—
Wellesley, . . .	1	200	200	—	120	200	—	—	—
	2	200	100	—	—	200	200	—	—
	3	—	—	200	—	200	200*	200*	—
	4	200	—	—	—	200	120*	120*	—
Fall River, . . .	1	160	—	160	160	160	—	—	—
	2	200	—	—	120	220	220	—	220
	3	160	—	—	100	240	240	—	240
	4	—	200	—	40	240	240	200	240

\* French or German.

† If needed.

‡ Elective.

*Course B.*

NAME OF TOWN OR CITY.	Year of Course.	NUMBER OF RECITATIONS YEARLY.					
		Mathe- matics.	Science.	History.	LANGUAGE AND LITERATURE.		
					English.	Latin.	French.
Canton, . . .	1	266	133	200	—	200	—
	2	200	186	53	—	160	—
	3	—	200	—	—	200	160
	4	—	—	—	200	160	160
Sharon, . . .	1	200	—	—	200	200	—
	2	200	66	133	—	200	—
	3	200	—	—	200	200	—
	4	—	133	66	—	200	200
Stoughton, . . .	1	266	—	133	—	200	—
	2	—	133	200	—	200	—
	3	200	200	—	—	200	—
	4	—	200	—	200	200	200
Mansfield, . . .	1	266	—	133	—	200	—
	2	200	—	200	—	200	—
	3	—	—	—	200	200	200
Dedham, . . .	1	240	80	80	80	160	—
	2	120	160	—	80	160	120
	3	—	160	80	80	160	120
	4	120	60	40	160	160	120
Walpole, . . .	1	200	93	160	140	133	—
	2	160	160	80	120	160	—
	3	—	133	—	120	160	160
	4	—	186	66	66	160	160
Easton, . . .	1	200	—	—	200	200	—
	2	333	66	—	—	200	—
	3	—	200	200	—	200	—
	4	200	—	—	—	200	200
Fall River, . . .	1	160	—	160	160	160	—
	2	160	—	160	160	160	—
	3	80	80	—	160	160	160*
	4	—	160	—	160	160	160*
North Attleborough,	1	160	53	—	286	200	—
	2	160	200	—	80	160	—
	3	—	106	213	80	160	—
	4	—	—	—	280	160	200
Milton, . . .	1	160	40	106	93	160	—
	2	173	146	80	53	120†	—
	3	—	80	240	80	160†	—
	4	40	200	80	80§	160‡	—

\* French or German.

† Latin or French.

‡ Latin or Mathematics.

§ English or French.

*Course C.*

NAME OF TOWN OR CITY.	Year of Course.	NUMBER OF RECITATIONS YEARLY.					
		Mathe- matics.	Science.	History.	LANGUAGE AND LITERATURE.		
					English.	Latin.	French.
Dedham, . . .	1	240	40	80	80	—	—
	2	120	160	80	80	—	120
	3	—	160	80	80	—	120
	4	—	160	80	120	—	120
Foxborough, . .	1	200	160	—	—	200	—
	2	133	266	—	—	200	—
	3	200	200	—	66	166	—
	4	—	—	306	253	—	—
Randolph, . . .	1	200	—	160	—	160	—
	2	200	160	—	—	160	—
	3	—	160	—	200	160§	—
	4	—	160	—	200	160§	—
Norfolk, . . .	1	200	53	106	106	53*	—
	2	200	160	—	—	160*	—
	3	200	266	—	—	53*	—
	4	—	—	320	200	—	—
Wrentham, . . .	1	200	40	106	106	53	—
	2	266†	—	—	200†	200	—
	3	200	240	—	—	200	—
	4	200	—	53	—	200†	80‡
Sharon, . . .	1	200	66	133	200	—	—
	2	200	66	133	200	—	—
	3	200	200	—	200	—	—
	4	50	183	183	—	—	200
Mansfield, . . .	1	266	—	133	200	—	—
	2	200	333	66	—	—	—
	3	66	133	—	200	—	200
Cohasset, . . .	1	200	80	120	40	160	—
	2	280	—	120	80*	200	—
	3	—	280†	80*	80	160	160*
	4	80	280†	80*	—	160	160*
New Bedford, . .	1	272†	136†	—	200	—	—
	2	112	208	—	160	—	—
	3	48	224	48	200	—	120
	4	—	160	160	160	—	80
Milton, . . .	1	160	40	106	93	160	—
	2	173	146	80	53	120§	—
	3	—	80	240	80	160§	—
	4	40	200	80	80§	160	—

\* Or German.

† Part of this is elective.

‡ Elective.

§ Or French.

|| Or Mathematics.

*Course D.*

NAME OF TOWN OR CITY.	Year of Course.	NUMBER OF RECITATIONS YEARLY.						
		Mathe- matics.	Science.	History.	LANGUAGE AND LITERATURE.			
					English.	Latin.	French.	Ger- man.
Fairhaven, . . .	1	200	146	—	133	200*	200*	—
	2	200	133	133	133	200*	200*	—
	3	200	173	—	186	200*	200*	—
	4	200	66	173	106	200*	200*	—
Brookline, . . .	1	100	160	—	100	140*	160*	—
	2	200†	—	100	100	120*	120*	160*
	3	140†	160	—	100	120*	120*	120*
	4	—	120	120	100	160*	120*	120*
Holbrook, . . .	1	266	53	160	120	—	—	—
	2	160	160	160	120	—	—	—
	3	160	266	53	120	—	—	—
Norfolk, . . .	1	200	106	106	106	—	—	—
	2	253	266	—	—	—	—	—
	3	253	266	—	—	—	—	—
	4	—	—	320	200	—	—	—
Quincy, . . .	1	160	80*	80*	200	160*	—	—
	2	240†	160	80*	40	160*	—	—
	3	—	80*	160	40	160*	160*	—
	4	—	160*	—	160	160*	160*	—
Wrentham, . . .	1	266	93	133	106	—	—	—
	2	266	333†	—	200†	—	—	—
	3	183†	400†	66	50	—	—	—
Cohasset, . . .	1	280	80	120	120	—	—	—
	2	280	120	120	80	—	—	—
	3	—	280†	80*	200	—	160*	—
	4	—	280†	80*	160	—	160	—
New Bedford, . .	1	160	—	160	160	—	—	—
	2	240†	80*	—	160	160*	—	—
	3	—	360*	—	160	160*	160*	160*
	4	—	320*	160*	160	160*	160*	160*
Wellesley, . . .	1	200	200	—	120	200*	—	—
	2	200	100	100	120	200*	—	—
	3	66*	233	200	200	200*	200*	200*
	4	—	66	66*	200	200*	120*	120*
Taunton, . . .	1	200	160	160*	—	160*	—	—
	2	80*	100*	—	200	160*	160*	160*
	3	—	160*	—	200	160*	160*	160*
	4	160†	320†	80	—	200*	160*	200*

\* Elective.

† Portion of this elective.

The courses of study above outlined, representing as they doubtless do the variety if not the actual character of high-school courses in the State at large, present an unanswerable argument for a more systematic and scientific distribution of studies. Absolute uniformity may not be desirable, but there can be no good reason assigned for the great difference of estimate as to the relative value of studies indicated in these programs. Why, for example, may students taking the classical course in one city have as many as eight hundred and eighty recitations in English language and literature during four years, while students of the same course elsewhere have only one hundred and twenty? Or upon what principle is a course prepared which gives to mathematics four-fold the time that is given to history, or which gives to Latin six times as many recitations in four years as to English, or which gives almost no attention at all to science? Other inequalities and absurdities appear which it is not necessary to discuss. The only points of importance for us to consider are: first, the fact that there *are* inequalities and absurdities in the present courses of study; and secondly, how existing faults may be remedied.

The unequal distribution of subjects in the various cities and towns is shown in the following tables, which give the *maximum* and *minimum* of recitations in required studies:—

*1. Courses in which Latin and Greek are required.*

	Maximum.	Minimum.
Mathematics, . . . . .	640	200
Science, . . . . .	480	0
History, . . . . .	280	0
English language and literature, . . . . .	880	120
Latin, . . . . .	1,060	540
Greek, . . . . .	700	420

2. *Courses which require Latin and French or Latin and German.*

	Maximum.	Minimum.
Mathematics, . . . . .	733	320
Science, . . . . .	533	—
History, . . . . .	506	200
English language and literature, . . . . .	726	200
Latin, . . . . .	800	600
French or German, . . . . .	360	200

3. *Courses which require only One Foreign Language.*

	Maximum.	Minimum.
Mathematics, . . . . .	600	360
Science, . . . . .	680	280
History, . . . . .	449	160
English language and literature, . . . . .	720	306
Foreign language, . . . . .	680	266

There is another feature of the program allotment of subjects and times to which I would call especial attention, and that is the occasional practice of providing for preparation for college in schools where such preparation is not required by law, and where the teaching force is limited. I recall three of such schools in which the larger number of pupils are deprived of proper attention, and are not permitted to receive instruction in those subjects which would be of most benefit to them. Their interests, for which we may presume the school was chiefly established, are sacrificed to those of two or three pupils whose preparation for college takes the major part of the teacher's time. A marked example of the neglect of important subjects was found in a school recently visited, where



the subjects were distributed as follows (the figures denote the number of minutes' instruction weekly) : —

Arithmetic, . . . .	140	English literature, . . .	90
Algebra, . . . .	110	English composition, . .	90
Geometry, . . . .	35	Spelling, . . . .	75
Physical geography, . .	110	Latin, . . . .	550
Drawing and singing, .	60	Greek, . . . .	170

Here it will be seen that, of 1,430 minutes' time given to instruction by a single teacher, 550 minutes, or over 38 per cent. of the entire time, was given to Latin alone, 11 per cent. to Greek and about the same amount of time to English literature and composition. I was told that history had a place in the curriculum of studies last year, and that physics and botany were sometimes taught, taking the place of mathematics and physical geography.

In my report of last year, speaking of courses of study for elementary schools, I said that it would be well for a general course to be made by competent persons, and to be issued by some central authority, subject to such changes as the varied circumstances of towns and cities might demand. This plan could and should be pursued in respect to courses of study for secondary schools. There can be no more danger attending such a plan than attends the present statute requirement determining the subjects of study. The States of Germany recognize the importance of having a professionally authoritative course, in requiring the minister of instruction to present to local authorities a general course, indicating the amount of time to be given to each branch of instruction. This course may be elaborated by school inspectors and masters, but its main features of time and subject limits cannot be changed. By the adoption of such means our school program would not be subject to the whims and prejudices of constantly changing boards and teachers, who may force upon the pupils an undue amount of one or another subject of instruction, according as these officials happen to be mathematically, scientifically or classically inclined. The making of a new course of study or the tinkering of an old one which signalizes the beginning of a new administration is a common event in this country, and can be prevented only by an authoritative designation of

the relative time which should be given to the various subjects required to be taught.

The National Teachers' Association at its last meeting recognized the importance of having some uniform and just standard of subject requirements and permissions, by appointing a committee to consider the matter and report. This committee, with expert advisers, are now at work, and it is hoped will give some conclusions which may be worthy of acceptance by local authorities.

#### EQUIPMENT.

Doubtless there has been a steady advance during the past few years in the character and amount of appliances for teaching in high schools. Yet my notes show that in most of the smaller schools and in some of the larger ones there is a deplorable want of apparatus that is essential to good work. Fully a third of the schools have no laboratories worthy of the name, and no reference books beyond a few old text-books. Just about one-third of the schools have chemical laboratories in which opportunity is afforded for individual work on the part of pupils. The physical laboratories are not so well equipped. Some of the best work in physics is done by pupils who are encouraged to make their own apparatus.

To secure adequate appliances for teaching in all schools, it would seem wise for the State to follow the example of some of the States of Europe in designating the *minimum* of apparatus which must be supplied for every high school, and to furnish an example of what may be provided by establishing in some convenient place a museum consisting of the most useful apparatus and reference books. Such museums are established and supported by some European countries with great benefit to teachers and other school officials.

#### TEACHERS.

Of the one hundred and eleven teachers employed in these schools, sixty-six, or about sixty per cent. of the entire number, are college graduates, and eighteen, or about seventeen per cent., are graduates of normal schools.

I shall have occasion to speak of the quality of the work done by teachers when I come to discuss special subjects. It

may be well, however, to refer here to the fact that they are, as a class, persons of high scholarship and character, devoted to their work and faithful in their duties as they know them. The faults of teachers most frequently observed, viz., failure to realize and reach after the true ends of education and inability to develop in their pupils power of the right kind, are due more to poor conditions of school administration than to any individual unworthiness. Most of these teachers were allowed to enter upon their work with absolutely no professional preparation, and the variety and quantity of work demanded of them frequently prevent that breadth of culture necessary to teachers of this class of schools.

#### ADMISSION OF PUPILS.

There still exists in some towns and cities the practice of admitting pupils to the high school upon the basis of a single written examination given by the school committee or superintendent. The entrance examination is giving way gradually to the adoption of means which are a fairer test of fitness, and which do not compel the teacher of the grammar school to resort to poor methods of instruction in anticipation of the examination. These better means are (1) the teachers' judgment as to the ability of pupils, and (2) the average results of written examinations throughout the year preceding the pupils' application for admission. These means of determining the pupils' fitness to take the high-school course are open to the objection of a difference of standard on the part of teachers, and should therefore be supplemented by agencies which will prevent possible injustice to pupils whose place is doubtful.

#### AGE AND CLASS OF PUPILS.

The average of pupils entering the smaller high schools is from fourteen to fourteen and a half years, and of those entering the larger schools from fifteen to fifteen and a half years. The range of ages of the entering pupils extends from eleven to seventeen years. The advanced age of pupils in the lowest classes of some high schools has led me to think that pupils were kept too long in the grammar school, an impression which is strengthened by an investigation of conditions in the lower

grades. I have reason to believe that there are many pupils who are prevented from entering the high school by reason of false standards of promotion. It is not uncommon to find fairly bright pupils sixteen and seventeen years of age in the grammar schools of cities and large towns. Some of these pupils doubtless are "kept back" by reason of irregularity of attendance, and some of them because they failed to get the required per cent. in passing from grade to grade. It is gratifying to know that the superintendents are investigating the causes of detention, and that many of them have already begun reforms by which some of the evils of the grade system will be avoided.

While it is true that the high schools are patronized by all classes, the conclusion has been forced upon me lately that the children of poor parents are the children who are most benefited by the system. In many graduating classes of the towns the only occupation of fathers reported is that of mechanic or laborer.

#### EXAMINATIONS AND REPORTS.

All high schools now have written examinations in nearly all subjects, given at intervals varying from one month to a term of twenty weeks. These examinations in a few schools determine the promotion of pupils; in other schools, and by far the greater number, promotions are determined by the examinations and by the daily work of pupils as judged by the teacher.

Nearly all schools send to parents reports of the pupils' standing in each subject studied, and in deportment. These reports in some schools give the results of the monthly or term examination only; in other schools the character of the daily work is shown either by percentages or by signs which indicate that the pupil is doing "excellent," "good," "satisfactory," "poor," or "very poor," work in a given subject. Many teachers still continue to mark the daily recitation of every pupil upon a scale of five, ten or one hundred, — a practice which I am glad to report is less common now than it was formerly.

#### INSTRUCTION.

To ascertain the character of the work done by teachers, I have in my visits of inspection taken careful note of means and methods observed, questioned the teachers as to their practice

in teaching the various subjects, and given to the pupils occasional examinations. Some of the results of my observations are noted briefly as follows : —

*College Preparatory Studies.* — Requirements for admission to college determine to a large degree the character of the instruction in all classes, and especially in the college preparatory classes. Until recently nearly all of the college entrance requirements compelled teachers to drill pupils in work which required an exercise of the verbal memory alone. The changed character of these requirements and the extension of the plan of admission by certificate have had some effect upon the teaching, particularly of English literature and science. In the teaching of foreign languages, also, improvement is noticed, especially in the direction of wider reading at sight.

*Latin and Greek.* — In all of the smaller and in some of the larger schools Latin is taught to pupils who have no expectation of going to college. It should be taught to such pupils with special reference to the enrichment of their knowledge and use of English. But I do not now remember hearing a single recitation in which the teacher seemed to have that purpose chiefly in mind. In syntax, translation and composition I have found the college preparatory work repeated in all classes alike, the only difference being in the amount and exactness of work required. Two or three years' instruction in Latin may be made useful to pupils who do not pursue the subject further, but it is of little use when only declensions, conjugations, rules and translations are required, especially when such work takes the place, as it frequently does, of needed training in English literature and language.

The so-called "inductive method" of teaching Latin and Greek seems to be growing in favor. My observation, supported by the favorable reports of teachers and superintendents, leads me to believe that more can be done in a better way by this method than by the method of learning declensions, conjugations and rules before the changed forms are recognized in reading. I have found pupils in the fifth month of study by the inductive method reading Cæsar and the Anabasis with a considerable degree of facility.

*French and German.* — German is taught in a few high schools, and French in nearly all. The length of the course



is generally two years, although it varies from one to four years. When the time spent is three years or more, very good results are obtained, the pupils at the end of this time being able to read understandingly almost any author without the aid of a dictionary. Frequently pupils are found reading easy French or German at sight during the second year of study, and in a few schools such reading is begun and carried on during the first year. Efforts in the direction of a "natural method" of teaching are often made with a fair degree of success; but when the method presupposes no knowledge of English on the part of learners, or when its purpose is simply to lead pupils to talk, the results can hardly be called satisfactory. Certainly access to the literature of France and Germany must be of more value to the average high-school student than the mere ability to converse in the language of those countries; and yet there is no good reason why both ends may not be attained. That these ends are attained in some schools is an argument alike against the old-time dictionary translation methods and some modern schemes which assume that boys and girls of eighteen should learn a new language precisely as children of three or four learn it, and which seems to place most emphasis upon conversation.

Upon the whole, I am inclined to think that French and German are better taught than other high-school branches of instruction. Several causes may be assigned for this excellence. In the first place, they are generally removed from the interference of strict college requirements and of other outside examinations; (2) they are frequently taught by teachers who have lived and studied abroad, or who have attended one or more of the excellent summer schools of language; (3) teachers have the assistance of many very good text-books and reading books in French and German which are now accessible.

*History.* — The question-and-answer method of recitation in history seems to be more common than any other. The tasks are generally set and learned by paragraphs or pages, and are recited either literally from the book or with varying degrees of original expression. The topical method is seldom used, and the "laboratory" method is apparently unknown, for very rarely is any other than one regular text-book used by either pupils or teacher. In the recitations to which I have listened there has



been no comparison of past and present conditions, and nothing of the philosophy of history has been given. In these recitations, in the compositions which I have called for, and in the lists of books which pupils have read, I have looked closely to see if the pupils by their instruction are inspired with a love of the study and a desire to extend their reading to historical subjects, and I am compelled to say that, with few exceptions, no such signs are apparent.

*Science.* — Generally speaking, the laboratories and apparatus of a school are a fair indication of the quality of science work done in that school. With these as criteria, it will be seen, from what I have said of “equipment,” that there is not a large amount of original laboratory work done by pupils. Many teachers still cling to the text-book method of teaching science, with no attempt at experimentation or even of illustration. Experiments are frequently talked about, and definitions and laws are learned from the book. This course is especially common in physical geography, physiology, geology and zoölogy. In physics and chemistry there is generally more time given and better work done than in other sciences; yet even in physics and chemistry the recitations which I have observed do not often seem to encourage a scientific spirit or a spirit of investigation and inquiry.

In science, more perhaps than in other departments, teachers are found teaching as they were taught. Not infrequently the college or normal school in which the teacher studied is recognized by the character of his work. Thus on several occasions I have been led to note that graduates of the Bridgewater normal school encourage their pupils to make their own apparatus in physics and to base their conclusions upon experiment and observation, and that graduates of the School of Technology excel in leading their pupils to dissect animals in connection with zoölogy; while graduates of certain colleges make the mistake of teaching by means of lecturing or of closely following the book and going over much ground.

As I have already indicated, the change in requirements for admission to college has affected favorably the science work not only in classes preparing for college but also in all other classes, particularly of the larger schools.

*English Literature and Language.* — The “study” of

“compendiums” of literature and books of biography and criticism is still pursued in some schools, but it is not now generally considered a good substitute for reading and examining closely the works of the authors themselves. Doubtless the many cheap editions of classic authors which have recently appeared have done much to change the character of the teaching of English; but we may believe that these editions have been published because of the demand which comes from better teaching in the colleges. Although upon the whole I am able to report a change for the better in the teaching of English, my notes show that much poor work is still being done. In one school, within a few rods of one of the finest public libraries in the State, I found that pupils had not read, in connection with their studies of English, anything from a standard author during the year, but had spent the time in learning about novelists and obscure writers of the eighteenth century. I am glad to say that not many such cases have come under my observation. Quite a number of schools, however, were found carrying on work in English but little better than that cited above. These schools encouraged in connection with the study of the biography and criticism of an author the reading in the class-room of some selection from his works. In a majority of recitations where such a course was pursued I failed to discover anything which would tend to cultivate a taste for good reading, or to give pupils more than a superficial idea of the author’s meaning. In many cases the recitation was no more than a poorly conducted reading lesson, in which little attention to expression was given.

But not all the work in English is of such a character. In my visits I found schools in which the best English and American authors were read and intelligently studied. The time of recitation in such schools was given to stimulating the pupils interest in and love for good literature. Long lessons were assigned for outside reading and study, and the work of the class-room was a delightful review of what had been read. Choice passages here and there were marked for memorizing, and opportunity was given for repeating what had been learned from time to time. The lists of books which pupils had read during four months previous to my visit disclosed the fact that, while the required amount of reading was great, the voluntary read-

ing in a similar direction was in many cases quite as much as what had been required.

This list of books just referred to may be of some interest as disclosing the character of the reading by children between the ages of fourteen and eighteen years, and in some respects testing the quality of teaching in the schools. My questions called for the number and title of books read through during four months previous to my visit. For convenience I made the following classification: 1. Books of history, biography and travels; 2. Long poems or plays, like “Evangeline” or “Merchant of Venice;” 3. Books of fiction. The following table shows the number of pupils in seventeen high schools who had read not any, one, two, three, four and five or more of the above class of books. The number of pupils represented is 1,042.

	Books of His- tory, Biography or Travel.	Long Poems.	Books of Fiction.
Number who had read not any, .	602	441	284
Number who had read one, . .	276	206	115
Number who had read two, . .	81	212	139
Number who had read three, . .	36	104	115
Number who had read four, . .	15	29	77
Number who had read five or more,	32	50	312

An examination of the reports of individual schools shows some interesting features. For example, a few pupils of several schools report that they have read over twenty books of fiction within four months. One pupil reports that he has read thirty books, another “over thirty,” and another forty-six. These statements, as well as others of those included in the above table, may have to be accepted with some grains of allowance, as certain pupils are apt to overstate rather than understate the amount they have done. One boy, in his eagerness to be credited for the full amount he has done, writes, after stating the number of books read, “I cannot remember all I have read. I read library books and *boox that I by.*”

In the lists of books presented, some interesting facts appear, first in the good quality of books read by pupils who have had the best instruction in literature, secondly in the good quality of books read by pupils of good homes where they have had, presumably, proper direction in the selection of books, and thirdly in the large number of trashy books that are read.

The following titles suggest the character of some books reported in nearly all lists: "Make or Break," "On the Border," "Tom the Ready," "The Caged Lion," "Through by Daylight," "The Boy Hunters," "The Red Raven," "Snagged and Sunk," "Cutlass and Cudgel."

I have been surprised also in reading these lists to find so many miserably weak or childish books read by pupils even in the graduating class. Many of these books are not actually harmful, but are not suitable for boys and girls of sixteen or eighteen years of age. Some inquiry leads me to suspect that the Sunday-school library as well as the public library is responsible for much of the reading of weak and harmful literature by pupils of the schools. To cultivate a taste for thoughtful and well-written books, and thereby prevent the reading of books that weaken and demoralize the mind, is the great work of the school; and I am happy in believing that some teachers are accomplishing much in this direction.

Discouraging as is the work in literature, that in language is even more so. My conclusions are based upon an examination of the courses of study, an inspection of the work in the classroom, and written tests given in nearly all the high schools of the two counties.

The courses of study show that comparatively little time is given to the study of language, and especially to that part of language which calls for original composition. English grammar as a separate study is pursued by all the pupils of only a few schools. In many schools it is taken by those pupils who do not take Latin. In some schools it is not taken at all except in connection with the study of literature. Rhetoric as a distinct study is not so generally pursued as it was formerly. There is a great variety in the amount and kind of written work required, from absolutely no work that can be called original to two or three original exercises weekly. It should be said that these extremes of practice exist in very few



schools, the general requirement being a monthly or bimonthly composition, and such written work as can be done in connection with the study of literature, rhetoric or grammar.

In very few schools have I found the teaching of language, either in theory or practice, what it should be. The practical application of the rules of grammar and rhetoric is much neglected, while there is little encouragement to original written work.

The tests in language were simply the correction of two sentences and the writing of an original composition upon a given subject. The sentences were as follows:—

“He called to see John and (<sup>I</sup><sub>me</sub>) last night.”

“Neither of us (<sup>was</sup><sub>were</sub>) at home.”

The pupils were asked to choose what they thought to be the correct word, and to give a rule or grammatical reason for their choice. The lowest percentage of correct answers obtained was seven; the highest sixty, with an average of about thirty. These tests, it will be remembered, were given to all the classes of about twenty schools.

In another test given to most of the schools the pupils were asked to write an original composition upon “The Effects of Tobacco and Alcohol upon the Human System,” or upon some subject connected with their history, or to write an abstract of a book they had read through during the previous four years. Pupils who could not write upon either of these subjects were asked to write upon “Massachusetts.” The time given for writing was twenty-five or thirty minutes. After seeing how little original work was required, and how poor the teaching was in this department of language, I was not surprised at the poor results obtained. The following papers represent the average ability in composition of pupils of the first or highest class in six high schools which are doing what may be called average work in English composition.

#### THE TALISMAN.

King Richard, leader of the crusaders falls sick and in the meanwhile the other chiefs of the expedition send the knight of the sleeping lion with messages concerning truce. On coming back he brings with him a Saracen physician sent by the Soldan of Egypt and Arabia, against whom they are waging war.

Many of the court ladies had come to Palestine with the army of England and Sir Kenneth the knight of the sleeping leopard had fallen in love with one of them, but she was far above his own station and he had nearly given up hopes of obtaining her hand. Sir Kenneth one night while defending the flag of King Richard is seduced from his post by the expectation of seeing Edith, the one whom he loves. Condemned to death for this his pardon with difficulty is obtained from King Richard by the Saracen Physician who has cured the king's malady.

#### LOOKING BACKWARD.

The narrator is a young man, who, being inclined to sleeplessness, employs the offices of a mesmerizer, who puts him to sleep, from which he awakes one hundred and twenty years after to find a great change in the world.

He finds himself in the house of a doctor, who explains to him how the the government is carried on. He awakes in the twentieth century and finds that there is an entirely new state of affairs.

The doctor, in one of his conversations with him, told him that the capital of the country was all in the hands of the government. The people had no money, each person had a credit card, which was equivalent to so much money, the amount for each person being the same. All were obliged to work from the time that they were twenty-one years of age, until they were forty-five. Each was expected to do his work to the best of his ability and was allowed to choose his profession.

Successful authors instead of receiving money for their works were allowed so much credit and were not obliged to work for a certain length of time. The morals of the world, he said had reached a higher standard. There was very little crime committed and few judges were needed, while there was no such thing as a jury.

There was an entirely new way of buying and selling. All was done by the government on an extensive but excellent plan. The book is nearly finished, when the reader is rather surprized to find that the writer awakes to find himself in his own house with his own serving man and found that this picture of the twentieth century is no reality but a dream.

#### EFFECT OF ALCOHOL AND TOBACCO ON THE HUMAN SYSTEM.

Alcohol and tobacco are very injurious to the human system. In many cases where persons drink alcohol freely, they die in a few years, while in other cases they live for many years, but they are of no use in the world, for their minds are not receiving the proper food.



And in the use of tobacco, many persons are injured. If boys use tobacco while they are young it dwarfs their mind, and they are unable to understand things, which they could have understood if their minds were not dwarfed. It also ruins their health, and so they are unable to get work.

#### THE COUNT OF MONTE CHRISTO.

The hero of the story was called Edmond Dantes. He was a sailor, a mate of a ship. For some reason which I did not quite grasp the meaning of he was thrown into prison in a dungeon. While in the prison he came in communication with a monk who was said to be insane because he offered large sums of money to be let out. This was the way he came to know him:—While he was sitting in his cell one day, he heard a scratching sound in the wall, & he thought that by pounding on his wall the sound would cease for a time if anyone was trying to escape & if there was no one trying to escape it would keep on. So he pounded on his wall & the noise stopped for a while & then it commenced again. He started to dig towards the sound & finally they met, this old monk who was trying to dig his way out. They had communication in this way for about 10 years. At last the old Monk died, but before he died he told Dantes where to find this treasure which had lead to his being called insane, and Dantes had a way to try to escape. He did not know how they buried the dead but he thought that they threw them into the sea. After the prison officials had prepared the old Monks body for burial, this Dantes took it out & got in himself. They threw the body over the bluff & while he was descending to the water he cut the bag open with a knife. He found the treasure and with it does lots of good in the world.

#### COLUMBUS.

Columbus was born in Genoa, Italy. His father was a wool-comber, but Christopher did not care for this trade, and was constantly reading books about vessels, and studying maps, charts etc. At one time he made his living in this way. He tried to persuade the people about a continent on this side of the water but he was considered foolish, and when walking along the streets of Genoa, even the little children would point their finger at him and laugh. He was a true Christian, and thought he should introduce the christian faith among other nations especially the Indians.

And so he did because he was the bravest, most loyal person who ever trod the earth. In his ideas, he was firm, and he had more knowledge of the globe than any other person living, at that time.

He was a fine appearing man with a large-framed body, curly hair and large brown eyes. There are many different pictures representing Columbus but few like *one* of whom the artist is unknown.

“EFFECT OF ALCOHOL AND TOBACCO UPON THE HUMAN SYSTEM.”

The human system is not suitable to be used as a depository for any narcotic, and as these may come under that head, they are injurious to life. Alcohol not only destroys the lining of the stomach, but as it becomes infused into the blood by which it passes over the whole body, it weakens the brain which is the seat of all intellect. As our intellect is dulled, we are not able to comprehend even the most simple things, and thus we are a burden to ourselves or friends, for what pleasures can there be for a human person when he lives from day to day without knowing anything of the outside world?

Tobacco, although perhaps not as harmful as alcohol, yet after a person has used it, he cannot control himself only when under its influence. Thus tobacco-smokers weaken their will-power by the constant use of tobacco almost as much as the opium smokers. There is a plea for tobacco, which is, that tobacco is very soothing to weak nervous people, but it is questionable whether it does not tend to increase the nervousness, instead of abating it. As we can live without alcohol or tobacco as many persons do, we are much better without them, as these persons also have proved.

While such work as this cannot be called very poor, it is not such work as we have a right to expect from average pupils of the highest class in any high school. With greater attention to English composition through the entire course, and with improved methods of teaching the subject, we may expect that these average results will be raised to the present standard of a few schools, which are giving an amount of time and attention to English commensurate to its importance.

CONCLUSION.

If this brief report of my inspection of the high schools approximates to the truth of their real condition and needs, two measures of reform seem necessary:—

1. The courses of study should be so made as to allow the subjects of instruction to be studied in their proper order, and to give to every subject its due share of time. These courses, as I have already indicated, might be uniform in their general

features, while in particulars they could be adapted to the needs of each school.

2. The teachers of these schools should be persons of broad scholarship, and have in some degree the professional training that is now demanded of secondary school teachers in other countries.

That the State through statute law is able to effect these reforms I have no doubt, and little may be expected in the way of real improvement in some places until this is done. If objection is raised against such an interference with local prerogatives, the same objection may be raised against the compulsory maintenance of the schools themselves. Surely the same authority which compels towns and cities to support high schools may properly make such provision as will insure their excellence, or prevent the waste of time and money which is inevitable under the present circumstances.

JOHN T. PRINCE.

DEC. 31, 1892.



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C.

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REPORT OF A. W. EDSON,

AGENT OF THE BOARD.

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# REPORT.

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*To the Board of Education.*

My work for the year has been in the same field — Hampden and Worcester counties — and along substantially the same lines as in the year preceding.

I have visited schools and held teachers' meetings in the following-named towns :—

Agawam,	Dana,	Monson,
Athol,	Harvard,	New Braintree,
Brimfield,	Leicester,	Palmer,
Charlton,	Mendon,	Uxbridge.

By invitation, or for some special purpose, I have visited the committees or some of the schools in —

Adams,	Harvard,	Springfield,
Ashburnham,	Lancaster,	Sterling,
Boston,	Leominster,	Upton,
Boylston,	Ludlow,	Uxbridge,
Bridgewater,	Millbury,	Waltham,
Brookline,	Newton,	Warren,
Chicopee,	Northbridge,	Webster,
Charlton,	Oxford,	West Boylston,
Clinton,	Petersham,	Westfield,
Framingham,	Princeton,	Wilbraham,
Franklin,	Somerville,	Winchendon,
Gardner,	Southbridge,	Worcester.
Grafton,	Southwick,	

I have also held teachers' meetings or assisted some other agent at meetings in —

Agawam,	Hubbardston,	Sterling (2),
Athol (2),	Monson,	Sturbridge,
Brimfield (2),	North Attleborough,	Templeton (2),
Brookfield,	North Brookfield,	Uxbridge,
Douglas,	Oxford,	Warren,
Easthampton,	Southborough,	Westborough (2),
Gardner,	Southwick,	West Brookfield,
Holden,	Spencer,	West Springfield.
Holyoke,		

At many of these meetings teachers were present from other towns than those named above.

At evening meetings I have addressed the people of—

Ashburnham (2),	Harvard,	Sturbridge,
Athol,	Hubbardston (2),	Sutton,
Barre,	North Attleborough,	Uxbridge,
Berlin,	Northbridge,	Ware,
Bolton,	Palmer (3),	Webster (2),
Charlton,	Petersham (2),	Westborough (2),
Chester,	Princeton,	W. Springfield (2),
Grafton,	Shrewsbury,	Wilbraham,
Hardwick,	Sterling,	Worcester.

On special occasions I have given addresses to the teachers at Amesbury and Lowell, at the Berkshire, Norfolk, Plymouth and Worcester county associations, and the Norfolk County Masters' Club; and have visited the Lancaster, Monson and Westborough reform schools, and held meetings with their teachers.

#### INSTITUTES.

During the year I have arranged for and assisted at ten institutes in this district, as follows: at Ashburnham, Chester, Clinton, Hubbardston, Petersham, Palmer, Uxbridge, Webster, Westborough and Wilbraham. These institutes were well attended by the teachers in the immediate vicinity. It was a common remark that the institutes this year were more suggestive and helpful than any ever before held in the vicinity. In all but two places — Ashburnham and Clinton — the institutes were preceded by evening meetings for the people.

#### SUPERVISION.

Recognizing more and more clearly that the hope of any substantial progress in the work of the schools rests very largely in the hands of those who have the oversight of them, I have labored much of my time to induce committees and towns to favor the employment of competent superintendents, and to assist superintendents to make supervision popular and effective. As a result I have to report the employment of six additional superintendents and the loss of but one town in my district. One town in Worcester County voted against supervision after a year's trial; this one town above all others in my district is in special need of supervision, or something to im-

prove the schools. As Acton took its place, the other towns, Sturbridge and West Brookfield, are still favored with the services of a good supervisor.

The new districts formed and superintendents employed are as follows: Agawam, Granville and Southwick; U. G. Wheeler, superintendent. Ashburnham joined Winchendon; C. P. Hall, superintendent. Harvard withdrew from the Ayer district and with Bolton joined Boylston and West Boylston; J. A. Pitman, superintendent. Lancaster and Westborough; True W. White, superintendent. Webster; D. P. Dame, superintendent. Mendon; Miss N. C. George, superintendent. West Springfield; C. E. Stevens, superintendent.

At a special town meeting in October, Athol voted in favor of supervision, but the committee has not yet engaged a superintendent. It is expected that an appropriation will be made and a superintendent secured early in the spring.

The change in Worcester County within four years from eight to fifty towns and cities employing skilled superintendents is something remarkable, and speaks well for the educational spirit of the people of the county.

### *Supervision for all Towns.*

It is no longer necessary to argue supervision with a man well informed on school matters, and deeply interested in the progress of the schools; he already is a firm believer in and advocate of it. He who objects to competent supervision, who questions its necessity and value, merely advertises his own ignorance of the needs of the schools.

If, then, the schools, with all their varied and vital interests, need the careful guidance of skilled superintendents, if supervision is a desirable feature of our school system, the measure should be extended to every town in the State. The Legislature should at once pass a law requiring each school committee to employ a competent superintendent, either alone or in conjunction with other towns. The law now requires each town to elect a school committee, and the school committee to employ a suitable number of competent teachers. It should also require each committee to employ a superintendent, for a superintendent is essential to the best work in any town or city.

School superintendents are doing as good work and are as necessary in the small country towns as in larger places. From

ten to forty—in some towns seventy-five per cent. of the teachers are changed each year. Young and inexperienced teachers are constantly entering the ranks. To unify the work throughout the town, to avoid waste and loss, to improve the methods, to put every teacher at her best, to enthuse the whole teaching force with a true professional spirit, a competent superintendent is indispensable in every community. This being so, there should be no *may* about the employment of such a person.

The reasons for the rejection of supervision are many, and often pitifully small and absurd. As an illustration, in one of the larger towns in this district the leading citizens and teachers were united in favor of the employment of a school superintendent, but at the last moment several members of the committee declared that they would not serve without pay, that they must have the one hundred dollars allowed each. They and their friends defeated the measure when it was proposed at town meeting. The question was not decided on its merits; the children and schools were entirely overlooked; the school committee alone received consideration. It appears to be a commonly accepted idea in some communities that the schools exist for the committee rather than for the children.

In pleasing contrast with the attitude of the school committee referred to above was the position taken by a well-equipped and valuable member in another town. He had been on the committee for several years, and felt that he ought not longer to serve, as he recognized the fact that he could not do for the schools what ought to be done. At the town meeting, when the subject of school supervision was under consideration, he said to the voters assembled: "I have felt for some time that I could not longer remain on the committee, and have placed my resignation in the hands of the selectmen. If, however, you vote to employ a school superintendent, I will withdraw my resignation and serve without compensation. I prefer to serve without pay with a superintendent, rather than with pay without a superintendent. I have been on the committee long enough to see the need of work in the schools that I cannot do." As a consequence the town voted favorably.

Over and over again I have fresh evidence that the committeemen best fitted to serve are most in favor of the employment

of skilled superintendents; they recognize their own limitations, their inability to do what ought to be done for the schools. On the other hand, the men least fitted to properly supervise are most opposed to the employment of some one who can; they either place their personal interests above the good of the schools, or fail to recognize their own incompetency. With such men arguments and facts have little weight.

The proper thing for the State to do is to insist that the good of the schools shall be first considered, — school committeemen afterwards. And right here I wish to bear testimony to the unselfish, efficient and invaluable service rendered by a very large proportion of the school committeemen in my district. The exception is so rare that it is all the more noticeable.

#### *Amendments.*

If supervision is not at once made compulsory throughout the State, the law relating to it should be amended in several important particulars. When districts are once formed, it should require more than a vote of one town to dissolve the union. The district should be broken up only by unanimous consent. Very small things often change a few votes. The haste and excitement attending a town meeting frequently prevent a full and candid consideration of measures of vital interest. Some uncomfortable member of the school committee, or some disappointed teacher, rejected in her application or displaced because of incompetency, may easily create a division in town, and cause an adverse vote. No such parties should have it in their power to overthrow supervision. The one town in Worcester County to vote out was influenced largely by the friends of one of the committee, a teacher in the town, who failed in her application for the position of superintendent. This town at the same meeting voted to apply its share of the income of the State school fund and the dog tax to pay for the construction of a railroad bridge. This course was a fitting accompaniment to the vote on supervision.

Again, the provision requiring at least thirty schools, and a valuation in any town not to exceed \$2,500,000, in order to form a district and receive State aid (law of 1888), should be amended so as to allow a district to be formed with a number of schools less than thirty, and a valuation above the limit



now fixed. The tendency in the smaller towns is towards consolidation, for the sake of classification, efficiency and economy. This tendency should be encouraged.

And, again, the minimum salary, now fixed at \$1,250, should be increased to \$1,500. This would attract a better class of candidates, and retain the superintendents longer. Any one qualified by training and experience to do supervisory work effectively should have at least \$1,500 salary. The State can well afford to increase its appropriation to each district from \$1,000 to \$1,250, or provide that at least \$750 of the \$1,000 granted shall be paid the superintendent.

#### TEACHERS.

Never before have the teaching ranks been so well filled with professionally trained teachers; never before have the teachers been so willing to attend educational gatherings, institutes, associations, summer schools, read books on the science and art of teaching, subscribe for educational journals, and strive to teach in accordance with correct principles. There is no question in my mind but that the work and results, on the whole, are better than ever before. And yet there is room for improvement.

One of the great defects in a large number of the teachers is lack of scholarship. Young people are anxious to begin to work too early; they are unwilling to wait and thoroughly prepare themselves. Broad and deep scholarship always has the advantage over superficiality. To teach one thing well, the teacher should know ten things.

Our State normal schools should make more of the scholarship of the candidates for entrance. Only those who have completed a four-years high-school course, or its equivalent, should be admitted as students. It is the boast of this State that we have two hundred and forty-five free public high schools, to which ninety-five per cent. of our people have access. Under the provisions of the law of 1891, all children that live in towns which do not maintain high schools may receive high-school instruction out of town at the expense of the town where they reside.

The argument of forty years ago, that many of our young people would be debarred from the normal schools if the



standard of admission were raised, has no weight at the present time. If we may judge of the scholarship of normal graduates by the requirements for admission, — as we have a right to do, since the work of the normal schools is supposed to be “strictly professional,” — it must be very elementary and superficial. A higher grade of scholarship as a prerequisite for admission would allow more time for the professional element in normal-school training. This would raise materially the character of the schools and the grade of teachers.

Again, a law should be passed establishing a State board of examiners, whose duty it should be to grant certificates to all would-be teachers who successfully pass a thorough examination on the subjects to be taught. This would certainly prevent much of the teaching (so called) all too prevalent to-day, by ruling out candidates until they had sufficient scholarship. Better-equipped teachers and a more permanent tenure of office — retention during good behavior, and dismissal only for cause — would elevate the profession of teaching immensely.

#### TRUANCY.

In spite of figures, statistics and reports of school officials, actual observation has convinced me that in every town and city there are many children of school age not in school who ought to be there, or who are not in school as regularly as they ought to be. The excuses are many and trifling. A more vigorous enforcement of the truant law would improve the school attendance, and prove a blessing to the coming generation.

A State truant officer, appointed by and under the direction of the State Board of Education, is needed. Local indifference or opposition to the enforcement of the truant law discourages the present truant officers in many places from doing their duty. Opposition of parents to having their children sent away from home, and opposition of towns to incurring the expense of two dollars per week for board at the truant school, are the two factors that operate against a strict enforcement of the law by the local truant officers. A State official to encourage and assist the local officers would have a healthy influence.

The new truant school recently located at Oakdale is a model in all of its appointments. If school committees, superintendents and police judges would visit this school and observe the

training, the schooling and home life provided there, they would surely make greater efforts to send some of their truants to this place. The superintendent, Mr. Johnson, is a man admirably fitted for the difficult and delicate task of managing the boys sent there. At present the attendance is almost entirely from the city of Worcester.

#### WORK OF THE SCHOOLS.

The work in the schools of this district varies with the place and the teacher; both extremes and all intermediate grades — good, bad and indifferent — are found. And one fact is quite noticeable, — local public sentiment is but little guide to the real condition of the schools. This is owing to the fact that people are apt to think their own children, their own town, their own institutions, a little superior to any others, their standard of comparison being limited.

If the people at all realized what an encouragement and stimulus is their occasional presence in the schools they would visit them more frequently. The people are all too willing to trust the entire education of their children to the school committee and teachers, entire strangers to them, and very likely having neither the mental nor moral qualifications necessary to undertake successfully the difficult and delicate task of training young people to be intelligent and virtuous. The people form their opinion of the teacher from what the children say, from street rumor, or from some slight personal acquaintance, and such an opinion as regards the real worth of the teacher is as likely to be wrong as right. As an instance, during the past year the chairman of the school committee in the town where I was visiting schools remarked, as we drove to the last school, "Now you will observe some good work. Here is the best teacher in town." After listening to the work for an hour and a half in the various classes and subjects, I inquired why he called this lady a good teacher. He replied, "She has good government, is popular with the pupils and parents, makes herself at home in the community." I replied, "Here is another illustration of where *tact* covers a multitude of sins, for in my opinion that teacher holds a low rank. Her work is very superficial and aimless." If the fathers and mothers

had seen as much of her in the school as out of it, they would have judged more accurately of her qualifications.

In the main, however, there is ground for encouragement. The trend of public sentiment is in the right direction. Better school buildings and supplies are being provided, thoroughly trained teachers are more and more in demand, better salaries are paid; and the results, while not all that could be desired, are improving from year to year.

The Worcester County Teachers' Association has two committees at work, one on nature study and one on supplementary reading; and it is expected that much interest will be awakened in these subjects in the near future.

#### COMMITTEE MEETINGS.

Teachers' meetings and institutes are designed to improve the methods of teaching. These gatherings are of special interest to teachers only. For some time I have felt that it would be an excellent plan to meet the school committees and superintendents in conference at convenient centres. Accordingly, early in December I addressed the following card to each school committeeman and superintendent in my district, except in the five cities: "There are many questions relating to school organization and management which cannot be considered profitably at teachers' institutes and meetings, but which are of great interest to school committees and superintendents. Afternoon or evening meetings might be held at convenient localities for the discussion of subjects, as courses of study, the employment and training of teachers, school attendance, classification, examinations, promotions, duties of school committees and superintendents. If you favor the plan of holding such a meeting in your vicinity, say at ———, will you please drop me a line to that effect, giving such suggestions in the matter as you deem best?" To this suggestion a very hearty response was made. I plan to hold such meetings at an early date at Worcester, Northborough, Clinton, Gardner, Athol, Uxbridge, Webster, Brookfield, Chester, Palmer, Springfield and Westfield.

Respectfully submitted,

A. W. EDSON.



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D.

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REPORT OF G. T. FLETCHER,

AGENT OF THE BOARD.

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# REPORT.

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*To the Board of Education.*

My work for the past year has been in the following towns: —

## *Berkshire County.*

Becket, Clarksburg, Dalton, Egremont, Florida, Great Barrington, Hinsdale, Lanesborough, Lee, Lenox, Monterey, New Ashford, North Adams, Otis, Pittsfield, Richmond, Savoy, Sheffield, Stockbridge, Tyringham, Washington, West Stockbridge, Williamsburg, Windsor.

## *Franklin County.*

Ashfield, Bernardston, Buckland, Charlemont, Colrain, Deerfield, Erving, Greenfield, Hawley, Heath, Leverett, Monroe, Montague, New Salem, Orange, Rowe, Shelburne, Shutesbury, Wendell, Whately.

## *Hampshire County.*

Amherst, Belchertown, Easthampton, Enfield, Granby, Greenwich, Hadley, Hatfield, Huntington, Northampton, Pelham, Southampton, South Hadley, Ware, Williamsburg.

Some towns outside of my district have been visited, to observe the work in their schools, and to attend educational meetings.

## TEACHERS' MEETINGS.

These have been held in twenty-five towns. In a number of cases assistance has been rendered by the State supervisor of drawing and a district superintendent of schools. These meetings have been attended by school committees and teachers from adjoining towns. Having inspected the schools in these towns, the agent is able to plan the meetings so that the advice and lessons given shall be of the greatest value to the teachers. These meetings have proved to be very helpful, and better

work in schools is evident because of them. In a few towns the teachers meet monthly for conference upon their work.

#### PUBLIC MEETINGS.

These have been held in twenty towns, to increase the interest of the people in their schools. The value and the cost of district supervision of schools have been discussed, and attention called to better methods of teaching. The duty of school committees has been emphasized, and the necessity of parental co-operation to secure attendance of pupils, better deportment and progress, has been urged.

#### TEACHERS' INSTITUTES.

The second session of the Laurel Park Institute opened in Northampton, June 29, and continued until July 6. It was a most profitable gathering. The location of the Park on both the Connecticut River, and New York, New Haven & Hartford railroads, within three minutes' walk of their stations, renders it the most desirable place in western Massachusetts for a summer school for teachers. The accommodations for board and lodging, at reasonable rates, are all that can be desired. The completion of Normal Hall will give a room of ample space for two hundred and fifty persons. In this room all lessons will be given in future meetings, should they be held.

One hundred and fifty teachers, from the four western counties of the State, representing forty towns, were present.

The Board of Education provided the teaching force, so that there was no charge for tuition, as in other summer schools. The corps of instructors consisted of Secretary Dickinson, agents Walton, Martin and Fletcher, Mr. Greenough of the Westfield normal school, Mr. Boyden and Miss Perry of the Bridgewater normal school, Miss Brassill of Quincy, Mrs. Davis and Miss Skinner of Springfield. Five of these teachers, specialists in their lines of work, gave lessons each day, making a progressive series.

Classes of children from different grades of school were taught by Miss Skinner in arithmetic, reading and language, according to the best modern methods, the teacher stating the principles upon which right instruction is based.

During the session of the institute lessons were given upon the principles of teaching, school management, reading, orthography, arithmetic, geography, language, history, writing, drawing, minerals, plants and animals. The value of such instruction can hardly be overestimated.

An inspiring address was given by Mrs. Kate Gannett Wells, of the State Board of Education, upon "Culture in Education and Manners." Rev. A. F. Hinckley of Northampton gave a very interesting lecture upon manual training. He also gave an exhibit of the work done in the schools of Northampton under his direction.

An institute of this kind, holding a session of a week, having a progressive series of lessons covering the essentials of the most important branches taught in the public schools, affords an educational opportunity greatly needed by teachers who have not had the benefit of special training. That no more teachers from the towns of western Massachusetts availed themselves of this rare opportunity, offered free of expense, is not an encouraging sign of the educational progress that we have a right to expect. Two causes may be assigned: lack of ambition upon the part of too many teachers to improve their work, and the failure of many committees to require the services of intelligent and trained teachers for their schools. The first cause is largely an effect of the second cause, and the conditions will not greatly change until there is a system of teachers' examinations that renders qualifications for good work a necessity.

#### LOCAL INSTITUTES.

In September and October these were held in Dalton, Monterey, Charlemont and New Salem. Twenty towns were represented at the different meetings by committees and teachers. Lessons were given by the agent of the State Board of Education, the assistant State supervisor of drawing and the principal of the Westfield normal school.

#### SCHOOL ATTENDANCE.

An examination of the school registers and a comparison of the number of pupils in attendance, with the number enrolled, reveals the fact that quite a percentage of the children are not

attending school regularly, while there are some children of school age in nearly all of the towns whose names do not appear on the school register. This is a matter of serious import. School committees have an authority, and teachers an influence, greater than is generally used to suppress the evil. Neighborhood quarrels, dislike of the teacher, poverty, and neglect of duty upon the part of parents, are some of the causes.

Better schools would in a measure overcome the evil. The teacher who makes the school a pleasant and profitable place, draws pupils to it. The teacher who visits parents, showing a kindly interest in their children, secures a home influence in favor of the school. But there must be an exercise of more authority, or truancy and other forms of non-attendance will not disappear. When town officials fail to perform their duties, the State must take measures to enforce law.

#### SCHOOL-HOUSES.

Quite expensive school-houses have been built during the year in a few places. In a larger number of rural towns the buildings have been improved by painting, and by sheathing the walls and ceiling of the room with narrow boards, to take the place, or to cover, dirty, cracked or broken plastering.

#### HEATING AND VENTILATION.

Enforcement of the law has introduced a system of warming and ventilating large buildings that has in most cases proved to be successful. A few of the smaller houses have jacketed stoves that work well. Occasionally one finds an arrangement of the windows for admission of air. But no plan yet devised will furnish pure air of the proper temperature at all times, unless an intelligent teacher gives the matter special attention.

#### OUT-BUILDINGS.

Regard for health and morals has wrought improvement in sanitary conditions. The larger buildings in cities and villages, especially those of modern construction, have the best arrangements. The reform has found its way into a small number of country towns, but in many localities health and

decency are not conserved by the condition of out-houses. If school committees are negligent regarding these matters, parents cannot afford to be ignorant or indifferent.

#### APPLIANCES.

The new and the old school-houses are better supplied with black-boards from year to year. Slate is being gradually introduced. It is expensive, but its superior quality and durability render it economical in the end.

Maps and charts are generally found in schools. In many cases the skill of teachers and pupils has well supplied the want. "Home-made" furnishings for practical use are often the best.

Text-books and other supplies have increased in quantity and improved in quality since they have been furnished by towns. A few towns or committees are penurious, a larger number of teachers are careless in the use of the supply, so that unnecessary expense is incurred.

#### METHOD OF INSTRUCTION.

"Teaching books," teaching subjects, teaching children, may be noted as steps in educational progress. Books and subjects are means only. "Teaching is causing some one to learn."

Much is said about a method of teaching; too much cannot be said about right principles; but the *object* sought, the education of the child, must be kept in view, or the method will not tend to secure needed results. Normal schools, institutes, professional reading and superintendence are very helpful to earnest teachers; but the eminently successful teacher must be a student of the application of principles to his daily work. System is valuable, individual power essential. Improvement in the quality of teaching is very perceptible, but it is too slow, considering the resources and the demands.

#### THE TEACHING FORCE.

This is supplied by colleges, academies, normal and public schools. The average ability of the teachers whom I meet is good. Material is not wanting. The standard of scholarship,



excepting in the higher grades, has not been raised in recent years. I am inclined to think it has been lowered since the days when more learned committees examined teachers, and the rural schools were larger and had some more advanced pupils. Professional training has improved the method of instruction to some extent, but too few normal school graduates are employed. Teachers' institutes, superintendence and professional literature have proved beneficial to the cause of education, and the teachers are improving in methods of work.

Better remuneration is needed to secure more efficient teachers, but the more pressing need in many towns is a school committee who will demand good work. A higher order of service must be rendered before its value can be known and appreciated. Give the people such service, and they will readily respond to a call from the committee for more money. The best teachers available are not always employed. When teachers known to be incompetent are retained in the schools, the children suffer loss and the good name of the town is injured.

#### EXAMINATION OF TEACHERS.

This should be given to determine scholarship, a knowledge of the principles of education and the right method of teaching. It is evident that such examinations can be properly conducted only by persons who are well informed upon the subjects and methods that find a place in the schools. Every person prepared to teach and desiring to do so should hold a certificate of qualifications from some examining board having recognized ability and authority. Qualified teachers and our best school committees desire some law that will secure better results than now appear. Some committees in western Massachusetts are sending to New York State for teachers who hold certificates from boards of examiners.

#### SCHOOL COMMITTEES.

For effective work three members are better than more. Occasionally six or nine members are upon the school board, evidently for the purpose of dividing the work, rather than improving it. A greater number than three can seldom be brought together for a meeting. Indeed, committee meetings



seem to be the exception rather than the rule. In some towns teachers are employed and dismissed, schools opened or closed, by any one member of the committee living in that "district." Of course such individual action is illegal, and it is generally mischievous. Many town quarrels over school matters would be averted by the action of the committee as a body.

In the larger number of towns I think committees try to do the best they can for the schools. A disposition to help the teacher is not lacking, but ability derived from experience is often not possessed. Rarely does a teacher testify to the aid rendered by a member of the committee in the line of modern methods of school work. Such assistance is at times valuable to the best teacher, while to the young, untrained and inexperienced teacher it is a vital necessity.

School committees have done a great work for the public schools; the State recognizes no other authority in the educational affairs of a town; there is still work enough that they must and can do, but an additional agency is required to direct teachers in methods of instruction and school management.

#### SPECIAL SUPERINTENDENCE.

The principles and practical results of skilled supervision have been so fully stated in the annual reports of the Board of Education that little need be said in the line of argument, though it is sometimes necessary to urge people to do what ought to be done. Under the law of 1888 more than one hundred towns have united to form supervision districts. The general results have been very satisfactory. The very few failures to continue the system have resulted from ignorance of its merits, unreasonable opposition to a new movement, or to lack of efficient work or judicious management by the superintendent.

Better teachers and schools are found in the towns that have improved their superintendence. The testimony of the best teachers to the value of the services of a superintendent is a convincing argument in its favor. Some school committees report that teachers have left towns where superintendents are not employed, to teach in other towns for less salary, because they and their schools could have the advantage of special oversight.

When the system becomes firmly established, receiving the hearty co-operation of committees and support of the people, our public schools will be greatly improved.

#### CHANGES IN THE LAW.

Not more than four towns should be required to form a district, though there may be less than thirty schools, because a larger area renders it difficult for a superintendent to do the most effective work.

The amount of money to be raised each year by the towns should not be an average of the gross amount for the three previous years, but an average of the amount raised during these years, per pupil. This change is necessary, because some of the hill towns have suffered such a loss in population and valuation that the necessity and ability to raise the amount of previous years does not now exist. Some towns, like Orange, Easthampton and Dalton, have nearly reached the maximum limit of valuation, but are not yet able to maintain supervision alone. The small towns of Erving and Wendell, Southampton and Westhampton, Lanesborough and Cheshire, now united with these larger towns in supervision districts, must be deprived of the present advantages if the larger towns are ruled out.

#### SUPERVISION DISTRICTS.

The district composed of Charlemont, Hawley, Heath, Monroe and Rowe was broken last spring by the failure of some of the towns to raise the required appropriation. Several causes, not necessary to mention here, contributed to the result. Enough improvement was made in the schools to warrant a continuance of the plan under new management.

Many citizens in all of the towns regret the action taken. An intelligent and candid consideration of the system will certainly lead to its re-establishment.

A new district was formed in March by the union of Colrain, Shelburne and Buckland. The group of towns has about thirty-five schools, and the territory is compact enough for efficient supervision. Improvement in the schools is manifest.

The towns of Sandisfield, New Marlborough, Tyringham and Monterey could have formed a new district last spring, but the

number of schools in all of the towns was less than thirty. These schools are scattered over a large area, and the four towns should be allowed to form a district. Other sparsely settled towns among the mountains and hills of western Massachusetts cannot have the benefit of superintendence unless the law is modified to meet circumstances.

#### IN THE SCHOOLS.

The results of all educational plans are to be judged here, and later, in life. The crucial test of system and method is the work of the school-room. Are the children learning to observe, to think and to express thought fluently and clearly? That children are earlier and better trained in the kindergartens and primary schools of to-day than ever before in other ways, no intelligent, honest observer can deny. This early training is especially needful, in view of the tendency to leave school before all possible advantages are secured.

Proficiency in reading, spelling, writing and drawing, and in oral and written expression of thought, is very evident. The most marked educational progress has been in the lower grades of school work; but the results in the grades above the primary do not fully meet expectations, excepting in a few towns where the school system is exceptionally good.

Ability to read understandingly and fluently, to think independently and to express thought logically, is not manifest so largely in the middle and higher grades of the village schools and in the upper classes of the rural schools as is desirable. Three causes may be assigned: Immaturity of mind in the pupils, too many studies for thorough work, and lack of the most intelligent teaching.

In adjusting the grammar school work to that of the primary grades, there seems to be a "missing link." With young children, objects and pictures, the concrete instead of the abstract, must predominate in the teaching. Objective teaching must continue in all grades; but the abstract must be introduced gradually, as the pupil is able to perceive principles and relations. There is too much telling and too little teaching. The brevity of school life for the average pupil renders it necessary to give special attention to the essentials of a few of the most important subjects. Time and strength are wasted by teachers

and pupils upon matters having little practical use or educational value.

Knowledge cannot be “imparted” by the most skilful teacher,—it is a product of the pupil’s self-activity. Discipline of mind can come only through the independent thinking of the pupil. The right method of teaching will furnish occasions of knowledge and stimulate mental action.

The public schools of the Commonwealth are by no means perfect, but they are adapted to the wants of the people to a remarkable degree, and they give substantial evidence of constant improvement.

G. T. FLETCHER.

NORTHAMPTON, Dec. 31, 1892.

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REPORT OF JAMES W. MACDONALD,  
AGENT OF THE BOARD.

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## REPORT.

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*To the Board of Education.*

My work of visiting schools began the first of last November. Since then I have visited nearly thirty high schools, in the counties of Middlesex, Essex and Plymouth, spending two whole days in some of the larger. I have also visited many grammar and other schools in the same counties, my visits to these being mainly subservient to a study of the high schools. I have also held a number of conference meetings of high-school teachers, and by invitation have taken part in a number of general meetings.

I have everywhere received a cordial welcome, and my intercourse with the teachers of the schools I have visited has been very pleasant indeed. I have found them as a rule an earnest, faithful body of men and women, attached to their work, and eager to learn the best ways of doing it. I have furthermore found a general dissatisfaction with present results, that seems to me to betoken progress.

My visitation of high schools has been too limited to justify generalizations, but as a result, partly of this visitation, and partly of former experience, I may be permitted to make a few suggestions that I trust will be taken kindly, as they are meant.

First, in regard to management, there should be throughout a school a uniformity of practice regarding at least the important details of its management. This is not always the case in large schools having many teachers, and the lack of it often results in friction, loss of time, and distraction of attention, in some of the rooms.

To illustrate, suppose a school in which the plan of daily marking the recitations of the pupils exists. If all the teachers put their questions in such a way as to require answers that

can be appraised, and if the record is made at once in the presence of the pupils, then the effect, whatever it may be, will be uniform throughout the school; but if one teacher does this, while another, pursuing a method of teaching that does not admit of formal questions and answers, but calls for more thinking on the part of the pupils, — and thinking is something that cannot be measured either quantitatively or qualitatively, — and, finding himself hampered by the record-book, does not make it so conspicuous in the recitation, but only fills it out (as of course he must) from general impressions at the end of the day or week perhaps, the effects will probably not be uniform. The pupils, while not giving any more attention on the whole to the preparation of their lessons than if there were no daily marking at all, will probably be influenced to give a disproportionate part of it to those where the effect on their standing is most apparent, to the neglect of the others. In such cases, the difficulties of teachers who are trying to cultivate observation and thought become greater than they would normally be.

I am not here intending to discuss the merits or demerits of the “daily marking” system, but only to illustrate how very different conditions may surround pupils in the different rooms of the same schools.

The ill effects of a lack of uniformity are most noticeable in matters of school discipline. In the same school it may be possible to find gradations of government varying from a monarchy to an anarchy. In one room the teacher may be demanding the closest attention of every pupil to the work in hand; in another room another teacher may be permitting a free and easy conduct, in which the pupils do about as they please. In such cases the pupils are likely to take their general tone from the less exacting discipline, and again the difficulties of the other teachers become greater than normal. I have seen teachers obliged frequently to interrupt the recitation to reprove acts that were freely permitted in some of the other rooms.

This fault, so far as it mars the efficiency of the school, could be remedied if principals would exert their legitimate authority to assimilate regulations and their enforcement. It seems to me that in this respect there is too great timidity on

the part of principals. I say too great timidity, because I feel sure that their non-interference is due in many cases to the fact that some of the subordinate teachers who may have a longer standing in the school than the principal himself are very sensitive to criticism, and have withal the support of local influences that the principal fears to antagonize; but in many cases I have no doubt that the principal's neglect is assignable to the fact that he is so overworked in his own classes that he has little time for such details. I think that not only this but many other defects in high schools could be remedied if principals were allowed more time for supervision. The school committees, to be sure, have the remedy in their hands, but they are little likely to notice such things. Here the services of the right kind of a superintendent are invaluable. It will, I think, be generally accepted that the regulations of a school should be reasonable, and adopted with a view to efficiency of school work and the cultivation of good habits, and then they should be uniformly and persistently enforced.

I have had the pleasure of meeting a good many scholarly and studious teachers who keep themselves well abreast of the times in the subjects they are teaching. I feel that the truth cannot be too often or too strongly pressed home, that to teach a subject well requires a good scholarly grasp of it, together with a wide practical acquaintance with related sciences from which it may be useful if not necessary to draw illustrations. It takes a great deal of learning to float properly a small amount of teaching. This is true for all grades; but it is evident that an amount of academic preparation that would do fairly well in a primary or intermediate school would be very meagre for a high school. It is too frequently, I regret to say, impressed upon the visitor's mind that the ratio between the average high-school teacher and the subject he is teaching is not so great as it is in the lower schools. Comparing my present observations and data that I have taken with my impressions of the past, I feel quite sure that the academic preparation of high-school teachers is rapidly increasing. Still, a deficiency in this respect is too common, and shows itself in an unhealthy servility to the text-book, a lack of perspective in the teaching, and an emphasis on minor and sometimes

insignificant points, that leave on the minds of the pupils a petty and erroneous view of the subject.

The defect here discussed is not always the fault of the teacher. Many recognize it in their own cases and lament it, without the opportunity to amend it. No academic learning sufficient for all time can be acquired before beginning to teach. To repair waste and keep up with progress require constant study. Comparatively few high-school teachers have the time for this. There is too much put upon them to do. The school day is divided into from five to seven recitation periods, in all of which the teacher has classes in as many as four or five different subjects. It is simply impossible for him to qualify himself in so many different sciences. It is only by the neglect of some that he can dip very deep into any. He is condemned to comparative ignorance. I do not feel certain that it would be best to carry specialization in the high school so far as to confine each teacher to one branch only. I am strongly of the opinion that it would not be best in the primary school, as well as that it is best in the college and university; but how rapidly specialization should proceed in the grades between, I am not sure. I would like to invite from grammar and high-school teachers opinions on this point.

A scholarly knowledge of the subject matter is not the only thing that the teacher needs. If not supplemented by a professional knowledge of the laws of mental development and the art of teaching, it sometimes results in the worst teaching to be found in the schools. It is not unusual to find such a teacher, surcharged with his subject, incessantly talking; telling, explaining, and displaying his learning to a class that sits interested, perhaps, but passive. To interest the pupil, this lecture method is certainly efficient if the teacher is a bright and pleasing talker, but to interest, though desirable, is not the only aim in education, and very rarely the chief aim. A lecture of itself has very little value educationally. In college, where it is intended to serve as a stimulus to a student to prove and investigate, it indirectly accomplishes much good; but in the high school, where no such results are expected or are likely to follow, where it is simply a continued stream of talk, one interesting fact displacing another in the minds of the pupils, I know of no pedagogic law by which it can be justified.



To these general observations it may not be amiss to add a few others of a more specific character.

In Latin and Greek I find as a general thing the teaching of the mechanical details of the languages, for example, the forms of words, the rules of syntax, drill in parsing, etc., fairly good, and not infrequently excellent; but beyond this mechanical side of the studies I find very little doing. During the whole or greater part of the first year the pupils are given much practice in translating easy English sentences into Latin, or the reverse, after the method of some one of the many excellent books for beginners now in use.

In this much care is taken to have the pupils learn to use the right forms of words, the weak place, if any, being the translation of the English passive; but as to shading the thought by the arrangement of the Latin sentence, one searches in vain to find the attention paid to it that it merits or demands. Take for example the sentence, The wind was driving the war-galleys towards the rocks. This may be intended to convey the thought that the wind was driving the *war-galleys* towards the rocks, or that the wind was driving the war-galleys *towards the rocks*, etc. Indeed, it would be highly improbable that these words would ever be put together except to express some one of the many shadings of the thought of which they are capable. Now, it is the very genius of the Latin language to express and show the particular emphasis in such a sentence by the arrangement. If, for instance, it is required to emphasize "towards the rocks," it makes a certain position in the sentence as necessary as that it should be written "ad saxa." It is on this live, expressive side of the language that the teaching fails, and consequently the language becomes doubly dead.

The fault that I am here criticising becomes even more conspicuous when the pupils get to translating Latin into English. There is almost no effort to have them learn to express the thought as indicated by the arrangement of the Latin sentences. For example, when Cicero (*Pro Lege Manilia*) says: "Dicendum est enim de Cn. Pompei singulari eximiaque virtute," and in the next breath, "Ita mihi non tam copia quam modus in dicendo quærendus est," one would never infer, from the translation that is commonly heard, that in the arrangement of his words Cicero was influenced by anything but mere

chance. I have heard in the same school classes translating Cæsar, Cicero's first against Catiline, and beautiful passages from Virgil; but from the expression of the pupils, I should never have distinguished the violent invective or the poetic play of fancy from the dry narrative. Their emasculated translations are accepted by the teachers as a matter of course, while the parsing is carefully and often minutely investigated.

This neglect of expression seems to me a misfortune, as it is in the expression of the thought rather than in the noun and verb endings that the genius and spirit of the language exists, and sacrificing the expression of the sentence to its mechanical details robs the language of its most potent means of mental discipline.

Expression both in writing and translating Latin can be cultivated, and teachers will not find it so difficult as they seem to imagine; but attention must be given to it from the very first lesson. It seems to me that the serious defect at present in teaching Latin and Greek is that the attention of the students is directed too much towards the word rather than the sentence, as the unit of the language, and that idioms are analyzed and atomized, rather than taught as a whole. It is too evident, when pupils are translating Cicero or Virgil, or even Cæsar, that they see in what they are reading, not models of literature, but mere vocabularies. These translations not only lack expression, but are composed of words so badly chosen and inapt as to preclude the claim that the pupils grasp the thought. It is plain that they are only assigning to the words of the sentence vocabulary meanings without regard to congruity; that their minds are on separate words, not sentences or thoughts.

In physics and chemistry I find a pretty general attempt to introduce experimental work, either to illustrate the statements of a text-book, or to unfold principles by original investigation. Of all the schools I have visited, not more than five or six are suitably equipped to do good scientific work in these branches. The methods of instruction may be classified under the four following heads:—

1. Classes studying text-books, with intermittent experiments at uncertain intervals, performed by the teacher for illustration only. In one case the experiments were to come after the book work was completed. The results by this



method were manifestly the least fruitful, though it should be said, in justice to the teachers, that their conditions seemed to leave them no alternative.

2. Classes studying text-books, with illustrative experiments carried on *pari passu*, each performed before the class by the teacher, or by a pupil under the teacher's direction. This method seems to yield some very good results, and to carry the classes over the ground rather faster than either of the following.

3. The development of principles primarily by experiments which are performed as in case 2, generally following some manual which holds, however, a secondary place, but sometimes without. The results by this method are seemingly very good, especially when in subsequent lessons the pupils are required to explain the experiments and the principles deduced from freehand drawings on the black-board. Both this method and the preceding have this advantage, that the teacher is able to hold the concentrated attention of the whole class on the experiment that is performing.

4. The same as in case 3, only all the pupils are working on experiments at the same time, and are supposed to perform the whole set. The disadvantage of this method seems to be that when the classes are very large, containing more than five or six pupils, it is difficult for the teacher to keep the attention of all the pupils on their work. The majority are liable to get to lolling over it, and toying with the apparatus in an unprofitable way, relying for their observation and notes on the teacher or the few pupils who do the work faithfully. This is especially noticeable in chemistry, unless, as I have said, the divisions are small, or the teacher has assistants. The maximum number of pupils in a division that I have named as suited for good work by the fourth method may seem small, but one has not to look very closely to see that where it is larger there is a considerable amount of dawdling. This should be prevented, for bad habits may be cultivated as well as good.

The forces that move minds, like those that move matter, exert their influence as a push or a pull. Where pupils have an ambition with a definite aim, there is no doubt that the fourth method is most conducive to the development of great-

ness ; but where this ambition is lacking, and pupils need the constant pressure of the teacher (*quæ maxima turba est*), it would seem that the third method, or perhaps the second, is the better. Where schools have two courses in physics, the fourth method seems to be the best for the advanced class. Few schools, however, are properly equipped for this work.

In teaching mathematics, as in teaching Latin and Greek, there is a part of the work that is necessarily mechanical, particularly in arithmetic and algebra. But to make this mechanical work of permanent value, there should underlie it a clear mental grasp of certain principles and processes. It is in this latter respect that the instruction in mathematics is weakest. As a result of this weakness, I have seen good teaching on the mechanical side seriously hampered.

In algebra the critical period is the first two months, and it is in this period that the teaching is most defective. The pupils not only fail to get clear ideas of algebraic notation and the four fundamental processes, but they are distracted and misled by too many artificial terms and directions that serve to deflect their minds from the correct principle. I refer to such expressions as "a over b," for  $\frac{a}{b}$  ; "a multiplied by the parentheses x-y," for a (x-y), and a host of others equally vague. It is just as easy to say, "a divided by b," and "a times the quantity x-y," and with every repetition the thought of the pupil is directed to the fact. The expression, "transpose," used so often in working equations, is another of the same brood. Teachers say they take great pains to explain what this term really means. That is just the objection to it. It requires much time and labor to show that the word does not mean what it says, and then its use is a constant force pulling the pupil's mind away from the true process. It is just as easy to use the word eliminate, which does mean what it says. We may say, for instance, "eliminate the known quantities (or some specified quantity) from the first member," etc. If pupils have been taught, as they should be, that to eliminate a quantity from a member of an equation it is only necessary to apply to the equation one of the four fundamental axioms, and that the axiom to be applied is the one that indicates the process opposite to the way in which the quantity enters into the combination ; for example, if it is added in the member,

then it must be subtracted from both members, and if it is multiplied into the member, then both members must be divided by it,—if, I say, the pupils have been taught this, four-fifths of the difficulty of solving simple equations, including “clearing of fractions,” will be obviated.

The usual rule for subtraction, “Change the signs and proceed as in addition,” is a constant source of trouble at this early stage in algebra. It is a device that permits the pupil to get a result without understanding why. The simple principle in subtraction is this: if a quantity is taken from a larger, the remainder is positive; if from a smaller, the remainder is negative. If pupils understand algebraic notation on the relative value of algebraic quantities, it will be found better to work by this principle than by an artificial rule.

In geometry the usual practice is to study the regular syllabus from a text-book in which the full demonstration of all the propositions is given. To make up for the obvious lack of mental training by this method, a great many so-called “original propositions” are given. These in the main are simple deductions from some proposition of the syllabus, ending in themselves, and of no consequence except for whatever mental discipline may be derived from proving them. They are necessary for discipline, where the reasoning of the syllabus is only to be traced out from the text-book; but they are defective in this, however, that they furnish little opportunity for consecutive reasoning. As a consequence of this practice, I find pupils are getting an erroneous view as to what is the valuable part of geometry. In answer to questions on this point, the pupils have invariably answered that the “originals” were. The only reason given me for studying the main syllabus was by one boy, who thought it was to get facts to prove the “originals” by.

A good many teachers are taking the syllabus by the original method, and in most cases with good results. The method requires a skilful teacher, who is master of his subject; one who knows how to pave the way with clear ideas. It gives me pleasure to say that I have found a few such, and I wish also to add, a few such pursuing the other method.

By the second method mentioned, the so-called originals are unnecessary; at least it is not necessary to mix in so many of them. By either method, it seems to me it would be better,

and would obviate the objection I have urged above, to complete the connected syllabus before turning aside to the isolated propositions. If this were done, the teacher, on finishing plane geometry, would find open before him a large and valuable field of work leading up to analytical geometry, on which all the surplus time of the class could be profitably spent. Indeed, it is unfortunate that so much time has to be spent on unimportant matter, with this field almost unexplored. To bring about a change in this respect, however, would require an arrangement with the colleges regarding their requirements.

Great extremes are found in the teaching of mathematics. I have in this department found some of the best and some of the worst teaching. There are more teachers of geometry than of any other subject that do not like their work, and this in a measure accounts for some of the poor results.

In history the work seems very unsatisfactory and unprofitable. It is mostly a memorizing of facts, with little regard to their relative importance. The philosophy that underlies the events is as a rule disregarded. As I do not as yet feel prepared to make suggestions, I will forbear further criticism.

I have endeavored in my visits to study the question of teaching English in the different phases in which it is found in the high school, — rhetoric, literature and composition. While not yet prepared to discuss the subject with any degree of fulness, I may perhaps venture a few words regarding what I have seen.

Little attention is paid to rhetoric, and that little is of a very elementary and apparently unfruitful character. Literature is studied chiefly for purposes of reproduction in composition work. As a means of cultivating literary taste and judgment, of studying style, value and application of figures, realism and idealism in literature, truth and consistency in description, arrangement and delicate shading of the thought, etc., it receives little attention. I wish here only to raise the question, Is this best? Is it best to take our master-pieces of literature, and cut them up into "composition lengths," and study them through the diffractive medium of a possible essay?

There is a great deal more attention paid to written composition than there was a few months ago. Not only is it made the chief end in the study of literature, as I have said,



but it is introduced into many of the other branches, to take the place of oral recitation. All this is good, provided there is some system of correcting this written work; but is there not a danger of going too far in this direction? Writing is not the only way, or even the most common way, of expressing ourselves. I feel moved to call attention to this fact, for the reason that, notwithstanding the increased attention paid to English, especially to composition, there is still the greatest negligence in respect to the oral language of the pupils. A great step will be taken towards the correct use of our mother tongue when we reform the English of the class-room.

Nothing but verbatim extracts could do justice to the English usually heard in the recitation. It is not so much the use of ungrammatical language. One very seldom hears two negatives, or "them" for "those," though "there are not but two," or "there are not but few," is heard quite commonly, even from teachers. But there are constantly heard misused words, broken sentences, dislocated phrases, to say nothing of the all-connecting "and." In translations, especially from the Latin, as I have already hinted, the pupil's English, judged by itself, is often a meaningless jargon.

In history, civics, literature, in about everything, in short, the original expressions of the pupils are generally in very poor English, unless, of course, they are reciting verbatim what they have committed to memory. A few teachers are making a sturdy fight against this evil, but most pass it over almost unnoticed.

I have tried to discover the cause for this helplessness and bewilderment of pupils when thrown upon their own resources, in trying to express themselves in their mother tongue; and, with this end in view, I have visited the schools below the high. My conclusions as yet are not very definite, and must be regarded as suggestions only. While I think the fault may be partly due to the carelessness of elementary teachers, I believe it is much more due to the vagueness, in the pupil's mind, of the ideas which he is attempting to express. In other words, his language is a fair representation of the ideas as he comprehends them.

This leads me to call attention to a very common and serious defect in high-school teaching. A great deal of it is vague,

and leaves but vague impressions in the minds of the pupils. The poor results are not manifest where the pupils learn the text-book and recite memoriter, but when they are thrown upon themselves they show their weakness by their stumbling language.

One thing seems to me undeniable, — clear ideas must precede good expression. Teaching pupils to express themselves without ideas is absurd. The study of English must begin with the acquisition of ideas. Now, are not all the studies in the school for this very purpose? Then where is there a better opportunity to teach the art of expression? Not by committing a text-book to memory. This may in a small degree help familiarize the pupils with the form and sound of words, but it will not aid them in cultivating the faculty of original expression. For this they must first be led to see clearly, and then be required to describe clearly to others.

The study of English should reach into every study in the high school. In recitations in rhetoric I have heard the pupils violating without restraint, in their own sentences, the very rules that they were studying, and using expressions much worse than those they were correcting in the book. I have heard a teacher in a class in rhetoric emphasize certain rules that he urged the pupils always to observe, and yet in another recitation in a different subject he permitted the pupils to violate those same rules, and others as important and simple, without once attempting to correct them.

In a few schools I found some excellent composition work. The teachers who had charge of the matter were acting on the idea that, to write well, the subject must be within the comprehension of the pupils. The connected flow of thoughts, and the easy, natural style of the language, testified to the wisdom of this. In one school, where the pupils were writing descriptions of familiar and historic scenes in their vicinity, they were illustrating the compositions by freehand sketches of what they were describing.

Respectfully submitted, .

J. W. MACDONALD.



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INDUSTRIAL DRAWING.

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REPORT OF HENRY T. BAILEY,

AGENT OF THE BOARD.

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# REPORT.

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*To the Board of Education.*

In this my fifth annual report I wish, first, to express to the members of the Board my appreciation of their unfailing interest in art education, and to thank them for the cordial support they have given me in my efforts to advance the cause of sound instruction in drawing in the State.

During the past year more has been accomplished, I believe, than in any previous year of my service. The following summary shows more visits to a larger number of cities and towns, and twenty-four more than the annual average number of addresses to teachers : —

Number of visits to cities and towns, . . . . .	171
Number of different cities and towns visited, . . . . .	79
Number of schools visited, . . . . .	160
Number of addresses at teachers' meetings, . . . . .	124
Number of State institutes attended, . . . . .	17
Number of visits to normal schools, . . . . .	6
Number of exhibitions inspected, . . . . .	7

But these statistics indicate but a part of what has been done. Mr. L. W. Sargent, the assistant supervisor for the four western counties, sends the following résumé of his work since his appointment, March 21, 1892 : —

Number of visits to cities and towns, . . . . .	100
Number of different cities and towns visited, . . . . .	65
Number of schools visited, . . . . .	270
Number of addresses at teachers' meetings, . . . . .	71
Number of State institutes attended, . . . . .	12
Number of normal schools visited, . . . . .	2

I am happy to add that Mr. Sargent's work is appreciated by his constituents, and that he has proved himself to be unusually well adapted to his position. I trust that his valuable ser-

vices will be retained by the Board. A statement of his work and of the needs of the western counties appears in another part of this report.

“There’s work enough, and [may there be] tools to work withal.”

In addition to the usual work of the office, and that already tabulated, I have devoted a considerable amount of time to the planning of a high-school course to supplement that prepared for the primary and grammar schools, and published in last year’s report.

The State has two hundred and forty-four high schools, of which about ninety per cent. do practically nothing in drawing; and of these not more than a half-dozen do legitimate high-school work with credit. The crowded courses, short hours, insufficient number of teachers, inconvenient high-school buildings, and, above all, lack of interest in the subject, are the causes of this wholesale disregard of the State law.

One act of the Board during the past year will, I believe, have some effect upon these high schools, and, besides, do much towards enforcing the law requiring drawing to be taught in every school. The following is from the official records of the Board, under date of April 6, 1892:—

*Voted*, That on and after September, 1893, drawing shall be included in the subjects of examination for admission to the normal schools.

This action has aroused some of the smaller towns, already, and has had a salutary influence upon such as have recently introduced drawing. Sooner or later this requirement will raise the grade of work in all the schools of the State, including the normal schools themselves.

At the present time only one of the five normal schools attempts to prepare pupils to teach drawing in high schools; nor can pupils be so prepared until provisions are made for advanced courses. No institution can produce accomplished high-school teachers from grammar-school graduates in two years’ time. By lengthening the course, and requiring a higher standard for admission, better results may be secured; and it is confidently expected that a high-school course in drawing, at least, will soon form a part of the required normal course.

A high-school course is, necessarily, of such a character that words alone can give but a faint idea of it to any but a specialist; nor could such a course be well illustrated in this report except at great expense. However, a tabulated form of the course may be useful for future reference, and is, therefore, given below.

This course plans for three years' work; the first "required" for all pupils, the two others "elective." The grammar work is first reviewed, than re-classified into more comprehensive groups, so that two distinct courses may be pursued thereafter; namely, a mechanical and a freehand course. The mechanical course includes projection, development, machinery and architecture, historic art, applied design and mechanical perspective. The freehand course includes pictorial drawing in outline, light and shade and color, historic art, applied design and mechanical perspective. By this arrangement both classes of pupils do the same work in perspective, — equally valuable to the architect, mechanic and artist, — and in those subjects pertaining to historic art and decoration, — pre-eminently, the "culture studies"

The successful teaching of such a course implies not only a well-trained teacher, — a specialist, — but pupils who have completed the grammar-school course in drawing; and a well-lighted, commodious room, bountifully supplied with models and objects, including machine and architectural details, charts, photographs and casts of historic ornament, reference books on mechanics, architecture and the fine arts, and examples of good modern design for metal and wood work, textile fabrics and other interior furnishings.

• Outline Course in Drawing for High Schools.\*

MECHANICAL COURSE.						
Measure- ment.	Geometry.	Projection.	Develop- ment.	Color.	Historic Ornament.	Plant Form.
Review: Drawing to scale.	Review: Geometrical problems; applications from architecture; machine details.	Review: Oblique plane sections of pyramids; intersecting sections, axes perpendicular.	Review: Complex flats.	Review: Original applications and harmonies.	Review: Classification of ornament into schools.	Review: Botanical analysis.
FREEHAND COURSE.						
Grade XI (2d year in high school).			Grade XII (3d year in high school).			
Orthographic Projection.			Pictorial Drawing.			
Relation of axes to planes of projection; plane sections of cone and cylindrical ring; spiral sections; intersections; axes oblique.			Outline, light and shade; single objects, groups, casts; out-door sketching.			
Development.			Perspective.			
Supplementary to projection.			<i>Parallel.</i> (Shadows.)			
Historic Art.			Applied Design.			
<i>Three Ancient Schools.</i> Including architecture and enrichment, form and color and pictorial art.			Constructive and decorative, as in stencils, tiles, hinges, turned and sawed work of simple construction.			
Architecture.			Light and shade, color; still life, objects, plants, casts; out-door sketching.			
<i>Study of a Building.</i> 1. Detail drawings. 2. Plans and elevations.			<i>Angular.</i> (Shadows.)			
Machinery.			FREEHAND COURSE.			
<i>Study of a Machine.</i> 1. Detail drawings. 2. Assembly drawings.			Constructive and decorative, as in oil cloths, prints, wall papers, cast and carved work, etc.			
Architectural.			FREEHAND COURSE.			
<i>Three Medieval Schools.</i> Including architecture and enrichment, form and color and pictorial art.			Constructive and decorative, as in oil cloths, prints, wall papers, cast and carved work, etc.			

\* Arranged with the valuable assistance of the three supervisors of drawing mentioned in last year's report.



That this course may be properly taught as a part of the normal course, the Board has appropriated a sum of money equal to one hundred dollars for each school, to be expended under the direction of the State supervisor of drawing, for the purchase of suitable machines, architectural models, casts, photographs, etc.

One sample architectural model has already been manufactured by the Milton Bradley Company of Springfield. It is a modern cottage house, built of wood, to the scale of one-half inch to the foot; and so constructed that the roof can be removed to show a second-floor plan; the second story, to show a first-floor plan; and one end of the house can be removed, to show a section. The house has "all the modern improvements" in miniature, detailed sufficiently to show all the lines of a conventional plan such as architects usually draw for the construction of a building. Plans are now being drawn for the other models.

The elementary course introduced into the normal schools last year begins to bear good fruit; samples of which were presented at a meeting of all the normal drawing teachers, held, through the courtesy of Secretary Dickinson, at the State House, Nov. 9, 1892. Each teacher presented a verbal report of the condition of drawing, and illustrated the course by means of drawings, sketch-books and note-books. Miss Field's report was especially interesting. The Normal Art School pupils devote their entire time to this one study and its related subjects; therefore a more exhaustive analysis and broader survey are possible. The following, from Miss Field's report of the course, will give some idea of its scope: —

PUBLIC SCHOOL TRAINING CLASS. — MASSACHUSETTS NORMAL ART SCHOOL.

*General Plan of Study.*

- I. MIND to be trained, — *Psychology*.
- II. PUBLIC SCHOOLS. Ends sought, and means employed. Art instruction an essential part of means.

*Classification of Exercises: —*

Primary — Things and processes.

Grammar — Principles and applications.

High — Higher scientific and art phases of subjects taught.

- III. OUTLINE COURSE IN ART INSTRUCTION: By subjects; by lessons.
- IV. ILLUSTRATIONS of the outline course.
- V. TEACHING EXERCISES, based on the outline course.
- VI. TEACHERS' MEETINGS: presentation of the subject of art instruction; series of lessons; individual lessons.
- VII. HISTORY OF EDUCATION.
- VIII. PRINCIPLES AND METHODS OF TEACHING.
- IX. ESSAY ON ART INSTRUCTION IN PUBLIC SCHOOLS.

The graduates of this school are doing excellent work as supervisors and teachers in many cities and towns in the Commonwealth; and one of the most capable, Mr. L. W. Sargent, has devoted his entire time, since last March, to the promotion of drawing in the four western counties. The statistics of his work have already been given; here is his statement of its character and conditions: —

In the four western counties of Massachusetts there are one hundred and three towns, in seventy of which no systematic work in drawing is attempted. The thirty-three towns, or about thirty-two per cent., where definite courses are followed and good results are obtained, are those having competent superintendents. The quality of work bears a fixed ratio to the quality of supervision it receives.

The great difficulty in the way of introducing drawing into schools where nothing has been done previously, is the total ignorance of the subject on the part of teachers and committees; and the worst effect of this ignorance is not that they do not know how to teach the subject, but that they can see no use in teaching it at all. It is a comparatively easy matter, in a town where there is a superintendent and where superintendent and teachers appreciate the value of drawing and are ready to do what they can, to show how the work should be done; but in many of the country towns of central and western Massachusetts these conditions, unfortunately, do not exist; and the laying out of a course of work seems almost a waste of time, until some such condition of things is brought about.

The work in schools and teachers' meetings in such towns has had these points in view: —

To show by actual results in the schools previous to a meeting that the children can draw, and to awaken an interest among the pupils in the subject.

To give, in the meeting, a statement of the place and value of drawing in the school work.

To lay out some definite steps for making a beginning.

In country schools where no drawing has been done, the enthusiasm of the children over a first lesson, and their delight in seeing that they can really draw something, has been a constant surprise and gratification.

The value of drawing in the school work is a subject which, while it usually gains the assent of the teachers, does not always secure the hearty consent necessary to success in those places where the teachers have never had an opportunity to visit schools in which the work is actually being done, and tangible results secured. It is hard to bring about a realization of the fact that all children of average ability can learn to draw; that drawing is not only for the one or two to be found in almost every school who have a natural aptitude for it, but that it gives a training and development that is possible and helpful to all,—development in a direction that can be followed to the same extent by no other study.

It has seemed wise to make the work as simple as possible, and to lay special emphasis on object drawing and illustrative sketching. In some places a good deal of attention has been given to clay modelling, form study and paper cutting; and yet, when an object was put before the children, they could not make either a working drawing or a pictorial representation of it. The work was good so far as it went, but it made an end of what should have been only the means. Perhaps it should be borne more definitely in mind that one of the results of successful teaching of drawing is ability to draw. An appreciation of this often secures good work in schools where very little material is furnished by the town. Some teachers have material enough to use in all grades from the primary to the high school, and are doing nothing because tablets or scissors have not arrived; and, on the other hand, in some country schools marbles, broom handles sawed up, and blocks, have served as type forms, and the children judge the proportions of and draw windows, doors, black-boards, objects in the room, fruit, leaves and maps, and illustrate history, geography and language work.

L. W. SARGENT,

*Assistant for the Western Counties.*

My work in the State institutes during the year has been unusually enjoyable, because of its relation to that of Mr. Arthur C. Boyden, in nature study. Less time has been given to the study of form and use of clay, and more to actual drawing from objects. I have endeavored to show the true order of steps from solid form to the geometric figure; the order of studying the geometric figures; their many applications in

common objects and in nature; to show a good method of drawing such natural objects as leaves and flowers; to lead children to see the perfect order and subtile proportions of their related parts, and to discover and love the marvellous beauty with which God has clothed the grass of the field and the tender herb.

Many evening meetings of the citizens have been attended during the year, and the claims of drawing as a school study have been presented and enforced by means of black-board illustrations. As a result some towns have recently introduced drawing, and others have been led to employ special teachers; and still others to relegate drawing books to second place, and put thought, truth and character first. The introduction of nature studies has aided in the emancipation of both pupils and teachers from the thralldom of the copy-book. Drawing begins to be recognized as a language for expressing other ideas, those of straightness, roundness, grayness of line, perseverance and dishonesty.

I hope to gather statistics during the coming year, similar to those given in the fifty-second report, so that in the fifty-seventh a comparison may be made, to show the decline or advance in the formalities of art instruction during the five intervening years. The true progress, — minds more susceptible to beauty, a deepening love for nature and art, a growing power to express the beautiful, — this progress is not reducible to the forms of cold type.

HENRY T. BAILEY.

NORTH SCITUATE, MASS., Dec. 31, 1892.

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INTEREST OF THE STATE IN THE  
ADVANCEMENT OF ART.

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BY ALBERT H. MUNSELL.

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## INTEREST OF THE STATE IN THE ADVANCEMENT OF ART.

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Paper read before the Boston Art Club, Nov. 19, 1892.

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WHY ART IS OF VITAL IMPORTANCE.

BELIEF THAT WE ARE ON THE EYE OF A GREAT ART-AWAKENING WHICH IS TO RESULT FROM THE COLUMBIAN EXPOSITION.

SUCH INTERNATIONAL CONTESTS HAVE NEVER FAILED TO STIMULATE PROGRESS, AND, BY LIFTING THE SCALES OF PREJUDICE FROM PROVINCIAL EYES, MADE NEW MOVEMENTS POSSIBLE.

MASSACHUSETTS MUST PREPARE TO PROFIT BY THIS OPPORTUNITY, AND LEAD THE MARCH OF PROGRESS, OR BE DISPLACED BY SOME YOUNGER AND MORE ENTERPRISING STATE.

WHAT HAS ALREADY BEEN ACCOMPLISHED.

WHAT REMAINS TO BE DONE.

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GENTLEMEN OF THE ART CLUB:—It savors of audacity, to say the least, to attempt any treatment of this broad subject within the limits of half an hour's talk; and it is manifestly impossible to more than sketch the outline and relations of this single figure in the group of allied interests which we know by the names of industry, commerce, education and art.

### WHY IS THE STATE INTERESTED IN ART?

We may be told at the outset that *the State has no interest whatever in art*; that, while industry, commerce and education are undoubtedly great public interests, art is essentially private, and not a member of that group. But let me ask you business men, does not art in some form, — painted, modelled, stamped, engraved,— does it not influence your profits? and, through your combined industries, does it not affect the Commonwealth? I need not ask educators whether art is of public interest or no.

They answered that question beyond all doubt in 1870, and have never had cause to recant. It is safe to assume, therefore, that art does affect the welfare of our people, and that the State is interested in its advancement.

#### PARENTAL ATTITUDE OF THE STATE.

Just as a father watches the unfolding natures of his children, anxious to give to each the best conditions for growth, and, when aware of an artistic temperament, seeks advice as to how it can be best developed, so the State feels the pulse of all its activities; and, if art appears within its borders and becomes a part of its life, then must this child be recognized and cherished like the others, its needs supplied and its future provided for.

Again, not only is the father interested in each child for its own sake, but also for its influence upon the life of the family.

So industry and commerce, education and art, are all intimately connected, mutually dependant; and the State cannot ignore or neglect one without indirectly, affecting all the others.

Commerce and industry well know their most valuable products are those which art has conceived and enhanced. Art in return is keenly sensitive to trade and to its many uses in industry; while education, in the work of producing good citizens, is called upon to furnish not alone the simple elements needed by every one, but to stimulate and train such special talents as will make for the enrichment, the renown and the uplifting of the community.

#### SUCH A POWER ART UNQUESTIONABLY HAS.

In a new country the spectacle of wealth rapidly acquired is not rare. Take, for example, the pioneer who goes into the wilderness and devotes all his energies to the struggle for food, clothing and shelter. Some day the discovery of precious metal or the approach of the railway may make him suddenly rich, and, leaving the wilds, he goes to mingle with other men in the Legislature, in Congress, or at some foreign capital. His entire attitude towards life changes. In the presence of a refined civilization he becomes aware of a new set of social and mental needs, of which he had until now been unconscious,

but which are just as imperative as were the physical needs of his early pioneer days. Anxious for the social standing of his family, he brings music, literature and art into the home, striving to create that atmosphere of cultivation without which the possession of countless gold savors of vulgarity. His children still bear the marks of a pioneer experience, but these he thinks to erase by education. So his rooms are filled with works of art and his library stocked with books. But in entertaining his guests, as he shows these possessions with much complacency, some inadvertent remark suddenly reveals the fact that, although he holds the body of these art-works, their spirit, their finer essence, has escaped him, and they belong more truly to the poor art-student who loves them, not for what they cost, but for the fine emotions they can stir; while the chance rejoinder of some guest suddenly opens up a social chasm which all his money may not bridge. Thus he comes at last to recognize a power greater than wealth, that of breeding and fine education, and so determines to afford his children what it is now too late for him to hope in any large measure for himself.

So the State in its first struggles for existence, or in war, pestilence and famine, can give no thought to art. But when prosperity is assured and wealth accumulates, then the State looks abroad to measure itself in the great society of nations, and seeing defects of education or social growth, strives to remedy such defects and place itself aright among its peers.

#### BEGINNING OF THE ART MOVEMENT IN 1870.

It was under such conditions and in just this spirit, that Massachusetts began its art movement twenty years ago, after repeated efforts by public-spirited citizens to arouse the Legislature to the industrial art needs of the hour. She was then, as now, a manufacturing State; but the designers in her mills were mainly foreigners, and the finest qualities of goods came from over-seas. Each year a volume of wealth was poured across the Atlantic for the purchase and transportation of such industrial products as were not to be found here; and the balance of trade was against her, because the profit on coarser grades was but a fraction of that upon the finer importations.

*She was forced to pay dearly for the lack of native skill, which was humiliating as well as expensive.*

#### EXPERIENCE OF OTHER COUNTRIES STUDIED.

In studying the situation, it was apparent that all industrial communities must at some time in their history pass through a similar experience, — must find themselves “hewers of wood and drawers of water” for a more skilful neighbor; and among all the expedients tried there was a striking convergence toward one essential, viz., *the art education of the people*. There might be great differences of opinion as to the means employed, but the result to be attained was the infusion of art into industry, and the general elevation of taste.

Some began in the workshops; but that seemed like the task of Sisyphus. Others founded museums, thinking the sight of industrial gems would stimulate their workmen to similar productions. But, admire as they might, they could not reproduce, for they were ignorant of the arts of design.

Then trade-schools were opened, where they might learn to draw these masterpieces; and by dint of close searching into their subtle beauties of form and enrichment, there came at last a grasp upon the principles of design, and an attempt at original creations.

Still the problem was not solved, for large classes of the community were yet beyond the reach of these means, and only when drawing entered the primary school as an essential in the education of youth did the art movement at last take on a solid and aggressive shape.

#### THE DRAWING ACT OF 1870.

Massachusetts already possessed a well-organized system of public instruction; she was thus specially prepared to profit by older experience, and begin at the right place. A petition was therefore presented to the General Court, for which public sentiment proved to be unprepared, since it failed of result until the following year. It was then known as the drawing act of 1870, and required the teaching of drawing in all public schools. It also provided for free instruction in industrial drawing to adults in towns of over ten thousand inhabitants.

## ARGUMENTS FOR AND AGAINST INDUSTRIAL ART EDUCATION.

Twenty years have proven the wisdom of this move, and amply answered the arguments brought against it. No one would now call it a pastime, an accomplishment fit only for the rich, and of no use in the every-day occupations of life. It is taught as a language universal, older than written records, and without limits of race or tongue.

The arguments in its favor are even more applicable to-day than they were two decades ago.

Statistics in this State showed that agriculture employed about seventy-one thousand persons, with a capital of two hundred and ten millions of dollars, the annual product being about forty-one millions, or a gross output of twenty per cent. Manufactures, on the other hand, employing about three hundred and sixteen thousand persons (four and one-half times as many as agriculture), and a capital of three hundred and eighty-three millions of dollars, created an annual value of five hundred and ninety-three millions, or a gross profit of two hundred and ten per cent. ; *i. e., industry paid more than ten times as well as agriculture.* Now it did not take a very long argument to prove that the paying element in manufacture was *skill*, and that skill was best developed by an industrial education.

A familiar illustration was that of the clay, which might be made into a common brick or into an art tile. In the first form it brought two cents, in the second it was worth two dollars; and this sudden increase of an hundred fold was due to the taste and skill which had directed its manufacture.

CHARLES C. PERKINS, WALTER SMITH AND JOHN D.  
PHILBRICK, PRIME MOVERS.

No one could present this question in a clearer or more persuasive light than the first director of art education, — Mr. Walter Smith of Leeds, England, who was sought out by a former president of this club, Mr. Charles C. Perkins, and who came at the combined call of city and State to take charge of the subject. The results of his able and enthusiastic labors are felt to-day not in this State alone, but throughout the country. The following quotation is from an address on “Technical



Education and Industrial Drawing," which he gave in Washington in 1879: —

Labor is the application of two powers: first, skill; second, force. The product is valuable in the proportion as it displays skill, and without value in the ratio of its absence of skill. This is as true about the making of a watch, or a nail, or a pair of boots, as about the performance of a difficult surgical operation. The skilled workman is the one who produces something of greater value out of the same material than the unskilled workman can, and with less waste of time and material. He is, therefore, a more profitable agent to employ than the unskilled, and his work being more valuable, he receives a higher compensation for it; whilst his employer, finding a ready market, at high prices, for industrial masterpieces, makes more profit on the sale of them than on unskilled productions. The purchaser is better satisfied with the article, and willing to pay a higher price for it than for one displaying no skill. So that the application of skill and taste in the production of an object gives (1) to the workman higher wages, (2) to the employer larger profits, and (3) to the purchaser more satisfaction, than if the skill and taste had been absent. This is the prosaic and practical aspect of the question, — its economical character.

There is another view I shall refer to, though not to enlarge upon. That may, if you please, be called the sentimental aspect, in contradistinction to the practical one. It is this: That the workman whose taste and skill are employed is a happier man than if only his muscles are used in his work. His soul and spirit are engaged; the immortal part of him is influencing his labor, breathing into the work of his hands the very breath of the life that shall never die.

Such a man was Raffaele, when painting the Sistine Madouna, transferring the image of his own beautiful soul to the canvas; an act of homage and praise to his Maker, for life and happiness, and a gift to all posterity of a "joy forever."

To the practical people, who don't believe in sentiment, I would also like to remark that the Sistine Madonna is *worth a good deal of money*.

What is true about the productions of one workman applies to all who are engaged in the industrial arts, and it is, therefore, equally true about a whole nation.

Walter Smith's arguments were in some quarters received with much disfavor, but they have since been abundantly borne out by the facts.



Sound humanitarian reasons were not wanting for giving this education to all alike, whatever their station or probable occupation in life. Superintendent Philbrick said, in his report for 1870: "It is now understood by well-informed persons that drawing is an essential branch of education, and that it ought to be taught to every child who is taught the three R's. It is indispensable as an element of general education, and it lies at the foundation of all technical education. It is difficult to conceive of any human occupation to which education in this branch would not prove beneficial."

#### RESULTS ACCOMPLISHED BY THE DRAWING ACT.

These social and economic reasons combined became a leaven that fell into the thought of the community and leavened the whole lump, so that the drawing act grew in public favor, and produced good results. No penalty attached to neglect of its requirements, and there was apathy at first in some sections; but to-day drawing is taught throughout the State, and there are free evening drawing schools in all the manufacturing centres. Free evening schools have been of great value to the artisans, providing just that training which they lacked when in the public schools, and without which they were truly unfitted for their daily occupations.

#### A TYPICAL CASE.

One striking example came under my notice in the modelling class which is held for twenty weeks each winter in this city. A wood-carver came to study clay modelling, for he had seen that the work of the best carvers gained through this study a more plastic quality. At the end of the first season the improvement in his work brought an increase of pay. The second winter he studied design for the round in connection with modelling, and obtained a position as modeller at the terra-cotta works, at another advance. Last winter he continued with more advanced work from the figure, and then returned to his original employer, prepared to design and execute his creations, instead of simply carving in wood the designs of others. *In these three years his salary had increased over seventy-five per cent.* Three evenings a week spent in

the company of serious students had developed his skill, broadened his horizon, and made him a more valuable member of the community.

#### THE NORMAL ART SCHOOL OPENED IN 1873.

For some time after the opening of these evening classes, it was difficult to find competent teachers. This led to the establishment of the State Normal Art School in 1873; and to-day it furnishes more than seventy-six per cent. of the teachers who are developing the study of art in our schools. As a result, then, of these twenty years of effort, the State has a chain of agencies, beginning with the kindergarten, passing through the primary, grammar and high schools, supplemented by the evening classes and nourished by the Normal Art School, which places the elementary study of art within the reach of all.

#### CONSTANT GROWTH A NECESSITY.

Of this we may be justly proud, and point with satisfaction to the improvement of public taste noticeable in our store windows, compared with what it was only ten years back.

But, while we have been busy, others have been not less so; and, instead of comfortably regarding the past, we must face the present, and ask if the State has done all that is needed for the development and future well-being of its art interests.

To this question I believe we can safely answer "No"! and as expert testimony I should like to quote from the first report on art in industry, by the Hon. Carroll D. Wright. He says:—

#### CHANGE OF INDUSTRIAL CONDITIONS IN MASSACHUSETTS.

Under the influence of modern progress, an essential feature of which is the extension of the railway system, industrial conditions in the United States are undergoing a change. Manufacturing towns need no longer be located upon rivers or near the sea-board, but may be established near the sources whence the raw materials are obtained. . . . Even now the West and South are coming forward as competitors with Massachusetts, and, while we recognize that by the exercise of proper foresight the progress of our own State may be wonderfully enhanced by the development of these districts, it is apparent that during that development, unless Massachusetts lifts

herself above her present industrial plane, she may find herself engaged in a serious struggle for supremacy and perhaps equality, as a producer of the lines of goods for which she has long been noted, — a struggle that may result disastrously to her manufacturing industries, no matter how well established such industries seem at present. *Indeed, the struggle has evidently begun.*

Plainly, if we are to hold our own industrially against enterprising new-comers, it must be by improving the quality of our products, so that, if the centre of production of the coarser grades of goods passes elsewhere, the manufacture of the finer grades may still be left in Eastern hands.

Statistics show that our manufacturing population has increased one-third in the last ten years. Those industries into which taste enters are paying an advance of forty-one per cent. over the cost of production, while the others only average twelve per cent. Art industries, therefore, and the art atmosphere in which they thrive have already become of vital interest, and we need as never before to study what other nations are doing for the higher art education of their people.

#### IMPORTANCE OF GOVERNMENT ART SCHOOLS ABROAD.

In Paris, in London, in Berlin, there are great schools of art, art in its broadest interpretation, and adapted to develop every energy of the mind. Side by side, with constant opportunity for intercourse and mutual helpfulness, work the students of painting, sculpture, architecture, engraving and gem-cutting. Each art gains breadth from its contact with all the others. From these centres flow out the influences which enrich and ennoble life.

#### THEIR BREADTH OF VIEW.

They do not say unless you will agree to teach you cannot enter, nor do they exact the payment of fees. These great schools are generously supported by the State. Tuition is free, and the only condition for entrance is ability to pass a severe competitive test, which eliminates four applicants out of five. Still, the classes are full to overflowing, and the students who fail to fulfil their early promise must drop out to make room for worthier. Some show that union of mechanical and artistic faculties which mark the skilful artisan; others develop that

temperament which distinguishes the artist, and still others add such sympathy and readiness in the imparting of knowledge that they are trained to become teachers. Thus the State discovers and develops impartially whatever faculties exist in the poorest as well as in the richest, and succeeds by scholarships and purses in placing at the disposal of every worthy youth the means of a complete education.

#### ARGUMENT BY EDWARD EVERETT IN 1824.

This is the ideal contemplated by Edward Everett, when he spoke at Cambridge, in 1824, upon the relations of a free government to the arts. He said: "The mental energy of a people which you propose to call out, the intellectual capacity which is to be cultivated and improved, has been equally diffused throughout the land by a sterner leveller than ever marched in the van of revolution,—the impartial providence of God. He has planted the germs of intellect alike in the city and in the country; by the beaten wayside and in the secluded valley and solitary hamlet."

It has been shown that ninety per cent. of the leaders in art and art industry come from the working class. But for free advantages they would have to stop short of a complete education, for want of means; and it is therefore to public, not to private schools, that they must look for their training. Nor can the State fail to reap abundant returns from the establishment of such schools. Besides all the material advantages, there is created an *art atmosphere*, indispensable for the proper ripening of artistic natures, which in turn makes greater progress possible. Some are inclined to treat this matter of art atmosphere as an affectation, a vague, intangible creation of the enthusiast's brain, which a good dose of common-sense would soon dispel. Yet there have been those to whose mental life it was as essential as ozone to the lungs.

#### VALUE OF AN ART ATMOSPHERE.

A wealthy English potter, visiting Paris, found there a skilful artist, and offered him a thousand pounds a year to superintend the designing of his wares. The contract stipulated that failure to remain a full year should forfeit all but the

expenses of travel. The artist crossed the channel and settled in the sooty manufacturing town, where all day the tall chimneys poured out long lines of smoke. Soon the useful but ugly wares began to assume beautiful shapes, which delighted the employer's eye, and, what was more to him, filled his money-bags. He talked of increase of salary. But, instead of becoming ambitious, the artist seemed to grow depressed, and his work gradually lost its finesse and charm. There was no museum where he could enjoy the presence of paintings and statuary; no fellow artist nor art student with whom to converse; no fine architecture in that dull, prosaic town, where the sharp struggle for daily bread exhausted every energy. He grew dispirited. He longed for Paris; for its beautiful avenues and parks, set with imposing architecture and enriched by statuary; for its museums, where he could daily study the masterpieces and gain new inspiration; for that numerous company of art workers in every branch, who constantly mingled and thus stimulated each other to higher achievements. He was *starving for want of an art atmosphere*, and before six months had passed he went to the potter and said, "My power to create is fast leaving me; I must break the contract;" and nothing would induce him to stay longer.

#### AMERICA'S DEFICIENCY AT THE PARIS EXPOSITION OF 1889.

Now, an art atmosphere may be slowly forming in some of our cities, but it is still very amateurish, and needs generous development. There was little sign of it in our showing at the Paris exposition three years ago. Except for the electrical exhibit, due mainly to the genius of a single individual, there was hardly anything to strike the attention of other nations but the huge piles of canned goods. Chauncey Depew confessed his mortification that the United States should appear so deficient in skill, and the representative of Great Britain tried to cheer him up by remarking, "Your presentation of petrified wood from Arizona is absolutely unequalled in this great show."

Yet this land is rich in two great factors of national prosperity, — *raw materials and men*; and it is only needed to make of these men skilled artisans and artists, in order to transform the raw material into products as beautiful and fine as can be found anywhere upon the face of the earth.



## VALUE OF ARTISTS AS CREATORS OF WEALTH.

There are not a few who look upon artists as unprofitable members of the community; dreamy, unpractical, often impecunious, and certainly of no value or importance to the Commonwealth. And yet, when Corôt died, and the government, as is its custom, gathered his works for a posthumous exhibition in Paris, their total value exceeded three millions of dollars. This was one man's contribution to the wealth of France, and a permanent one, for, whenever one of his paintings passes out of the country, there remains in its place a pile of gold coin many times the weight of the canvas, which represents in a financial way the value of his creative genius. The cost of all his canvas, brushes and paint is a mere trifle, compared with that value of three millions which they acquired when transmuted by the power of his mind.

## VALUE OF ART MONUMENTS AS ATTRACTIONS TO TOURISTS.

Nor is this a solitary instance. What a source of income to-day are all the Old Masters in Italy! Only lately the government forbade the sale of a gallery, knowing it to be more valuable as an attraction for tourists than the round sum offered for its purchase. In marked contrast was the action of this city in the case of Bastien-Lepage's "*Joan of Arc.*" The price asked was twelve thousand dollars, of which half was already subscribed, and only the remaining six thousand needed to enshrine it forever in our Art Museum, where it would have inspired all artistic natures, and proved an educator of the public taste. Instead, after waiting hopelessly for some time, it was taken to New York, where *it brought twenty-three thousand four hundred dollars at auction*, and is now one of the gems of the Metropolitan Museum.

## WHY STRESS IS LAID UPON THE MERCENARY SIDE OF THE QUESTION.

All this certainly goes to prove that we are not yet beyond the need of a higher education in matters of art, and if I have laid too much stress upon the mercenary side of the question, it is only in response to the commercial spirit of to-day, which asks if there be money in an enterprise before it ventures to



make an investment. Once begun, the movement will develop social and educational phases of the highest order, and the State will not only increase in wealth, but there will be cultivated that refinement and love of the beautiful which has been accounted the flower of all high civilization since the days of Pericles. It is true that the agencies set in motion twenty years ago are doing good service, but they need further development so as to keep abreast of the rapid progress of these times. To stand still in such a race is to fall behind.

#### WHAT MASSACHUSETTS NEEDS TO-DAY FOR THE DEVELOPMENT OF ART.

*The great need of to-day is a State school of art of the broadest scope, free to all who can pass satisfactory competitive examination, and with scholarships to send at least three picked students abroad every year, with proper safeguards to ensure the best use of their term of foreign study. The departure and return of students so chosen, and the exhibition of their work, would be an event in the social and artistic calendar.*

Four years ago I advocated this plan at the National Teachers' Convention in San Francisco, calling attention to the private scholarship already established for architects, and claiming that equal advantages should be given to painters and sculptors, and that at public expense. Since then two private scholarships for painters have been founded, but they are not related to each other nor to the one previously established, and must therefore lack that unity and force which is created by the single authority of the State.

#### POWER OF SUCH A SCHOOL IN FORMING PUBLIC SENTIMENT.

It is no simple matter to trace all the widening influences set in motion by a central school of art. Largely administered, it becomes the pride of the community, a centre of cultivation and refinement, furnishing not only the broadest and most complete education to its students, but also providing lectures of general public interest.

All great schools recognize this twofold duty, — an internal and special education, adapted to meet the needs of every student, and an external and general education which shall keep the community in touch and sympathy with its aims and prog-

ress. To this latter belong lectures, on the Industrial and Educational Phases of Art, on the History of Art, on the Study of Masterpieces, on Household Taste, and a host of allied subjects which, presented by able speakers, are of great interest and value to the public, and help even more than exhibitions to create that art atmosphere already shown to be indispensable.

#### SOME OF ITS DUTIES.

It should open competitions in design, in decorative and pictorial composition; and attract to itself as juries, advisory boards, professors and lecturers, the best talent to be obtained in or out of the community. It should found scholarships and prizes, reaching into the remotest corner of the State, to discover and aid worthy youth, and thus hold out the hope of foreign travel and study to those who by repeated tests prove themselves to be made of the right stuff for such liberal education. While enjoying these privileges, the recipients should still feel their relation to the school, holding themselves in readiness to do any service in their power, such as making investigations, reports or purchases which the faculty might deem for the good of the school; and upon their return they should keep up some connection with the institution; not being required to teach unless they have shown superior teaching ability, but ready to serve as lecturers, members of juries or advisory boards, and by their influence upon the students as well as in the community at large, to build up the atmosphere and traditions of a noble school.

#### THE OPPORTUNITY OF THIS STATE TO STILL PROVE ITSELF A LEADER IN PROGRESS.

This certainly seems to be the need of to-day, and it is most earnestly to be hoped that Massachusetts will feel it her duty and her opportunity to keep in the van of educational progress by making this move, which is in no way a doubtful experiment, but the well-established precedent of her seniors in the art-educational field. Otherwise she may soon have the chagrin of seeing some younger State excel her in public spirit, and bear off the palm of educational leadership so long her undisputed possession.

A. H. MUNSELL.





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# AN ABSTRACT

OF THE

SCHOOL RETURNS MADE BY THE SCHOOL COMMITTEES  
OF THE SEVERAL TOWNS AND CITIES IN THE  
COMMONWEALTH

FOR

THE SCHOOL-YEAR 1891-92.

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## BARNSTABLE COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The per cent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Barnstable,	4,023	\$3,533,470	25	594	382	746	—	98	411	626	573	.91	26
Bourne,	1,442	1,306,165	11	253	180	300	11	36	180	248	222	.89	12
Brewster,	1,003	528,825	6	148	97	165	—	17	97	136	123	.90	6
Chatham,	1,954	867,884	13	310	184	328	3	75	195	285	251	.88	13
Dennis,	2,899	1,299,104	17	458	303	581	1	35	345	448	405	.90	17
Eastham,	602	251,781	3	65	45	87	1	14	45	62	53	.85	3
Falmouth,	2,567	5,000,463	15	383	277	418	5	51	236	359	330	.92	16
Harwich,	2,734	1,062,791	13	367	245	426	1	40	230	307	327	.89	13
Mashpee,	298	173,350	3	52	49	64	1	6	44	60	53	.88	3
Orleans,	1,219	499,544	5	157	107	192	1	21	109	146	127	.87	5
Provincetown,	4,642	2,196,817	17	843	540	920	—	90	512	810	753	.92	22
Sandwich,	1,819	902,975	12	252	177	294	—	53	163	232	228	.90	13
Truro,	919	322,100	6	165	85	180	3	13	85	147	134	.91	6
Wellfleet,	1,291	615,745	7	165	119	210	—	40	134	185	170	.91	7
Yarmouth,	1,760	1,718,402	9	152	149	249	—	37	138	212	199	.94	9
Totals,	29,172	\$20,279,416	162	4,364	2,939	5,160	27	626	2,924	4,343	3,948	.90	171

## BERKSHIRE COUNTY.

Adams,	9,213	\$3,506,357	36	1,750	1,169	1,837	—	118	1,087	1,373	1,301	.94	41
Alford,	297	218,382	3	38	27	46	—	3	27	34	29	.85	2



## SCHOOL RETURNS.

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Becket, . . . . .	946	385,150	9	114	68	169	-	2	110	142	125	.88	9
Cheshire, . . . . .	1,308	711,958	10	237	141	295	3	16	157	211	190	.90	10
Clarksburg, . . . . .	884	215,037	4	135	90	199	1	3	82	125	103	.82	4
Dalton, . . . . .	2,885	2,234,840	15	468	320	593	1	29	319	453	416	.91	17
Egremont, . . . . .	845	425,100	3	52	76	120	3	6	78	101	82	.81	4
Florida, . . . . .	436	134,180	6	113	82	113	2	3	82	102	85	.84	6
Great Barrington, . . . . .	4,612	3,150,317	25	683	405	888	6	111	501	713	628	.88	27
Hancock, . . . . .	506	362,058	5	103	57	126	2	10	66	93	72	.78	5
Hinsdale, . . . . .	1,739	703,982	12	335	248	338	5	17	224	304	269	.88	12
Lauesborough, . . . . .	1,018	511,520	7	209	129	215	1	16	129	156	134	.86	7
Lee, . . . . .	3,785	1,755,319	15	650	506	728	11	17	437	550	487	.88	17
Lenox, . . . . .	2,889	2,794,338	13	468	264	562	6	11	328	408	346	.84	13
Monterey, . . . . .	495	225,551	5	95	73	99	-	4	73	76	66	.86	5
Mount Washington, . . . . .	148	79,669	2	20	10	18	1	1	14	14	11	.78	2
New Ashford, . . . . .	125	70,740	1	18	10	19	-	2	10	15	13	.86	1
New Marlborough, . . . . .	1,305	577,630	10	225	158	270	3	18	175	186	149	.80	10
North Adams, . . . . .	16,074	6,016,197	46	3,224	2,503	2,482	-	144	1,197	1,762	1,664	.94	56
Otis, . . . . .	583	220,042	8	111	86	113	1	15	79	83	73	.88	8
Peru, . . . . .	305	119,906	4	36	21	41	1	1	21	33	27	.81	4
Pittsfield, . . . . .	17,281	11,507,989	25	3,418	1,968	3,721	18	291	2,195	2,833	2,567	.91	86
Richmond, . . . . .	796	468,726	7	173	117	147	1	10	117	143	122	.85	7
Sandisfield, . . . . .	807	358,980	10	156	103	154	3	22	102	123	112	.91	10
Savoy, . . . . .	569	176,550	8	92	55	96	-	5	60	82	71	.86	8
Sheffield, . . . . .	1,954	884,155	14	320	198	352	8	36	211	279	222	.79	14
Stockbridge, . . . . .	2,132	2,853,085	9	287	195	355	2	30	193	296	274	.92	11
Tyringham, . . . . .	412	229,430	5	66	43	72	-	6	43	72	54	.75	5
Washington, . . . . .	434	202,888	7	100	67	106	6	-	67	74	62	.83	7
West Stockbridge, . . . . .	1,492	625,113	10	335	203	399	5	38	211	329	283	.86	11
Williamstown, . . . . .	4,221	2,270,717	18	674	424	860	6	77	478	588	584	.99	27
Windsor, . . . . .	612	202,748	7	126	90	136	4	6	85	233	173	.75	7
Totals, . . . . .	81,108	\$44,218,654	359	14,831	9,906	15,669	108	1,068	8,958	11,986	10,794	.90	453

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	Average wages per month of male teachers in Public Schools.	Average wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.					Salary of Principal.
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length.	
Barnstable, .	11	23	9	9	\$73 71	\$38 86	214	8-3	-	1	2	66	Taxation,	10	\$1,110 80
Bourne, .	2	21	4	3	93 00	39 00	89	8-1	-	1	2	38	Taxation,	9	840 00
Brewster, .	-	8	6	6	-	35 47	49-15	8-5	-	-	-	-	-	-	-
Chatham, .	3	12	-	-	53 33	24 73	111	8-11	1	1	1	46	Taxation,	8-10	900 00
Dennis, .	9	13	6	3	66 42	31 66	140-10	8-5	-	1	2	50	Taxation,	9	810 00
Eastham, .	1	3	2	1	40 00	33 33	26-5	8-15	-	-	-	-	-	-	-
Falmouth, .	3	22	7	6	70 37	42 50	135	9	-	1	2	49	Part tax,	9	1,000 00
Harwich, .	6	12	3	-	56 50	34 86	105	8-2	-	1	1	58	Taxation,	9	1,033 33
Mashpee, .	1	4	2	1	50 00	33 00	18	6	-	-	-	-	-	-	-
Orleans, .	2	7	5	3	70 00	40 00	45	9	-	-	-	-	-	-	-
Provincetown, .	3	22	3	2	113 18	29 56	161-10	9-10	-	1	3	80	Taxation,	9-10	1,200 00
Sandwich, .	5	14	3	2	75 00	33 50	98	8-3	-	1	2	40	Taxation,	10	1,000 00
Truro, .	1	9	3	3	50 00	36 00	54	9	-	-	-	-	-	-	-
Wellfleet, .	1	10	5	4	100 00	36 40	52-10	8-15	-	1	2	64	Taxation,	9	1,000 00
Yarmouth, .	4	5	2	2	70 28	39 60	81	9	-	1	1	30	Part tax,	9	1,000 00
Totals, .	52	185	60	45	\$70 77	\$35 54	1,380-10	8-8	1	10	18	521	-	92	\$9,894 13

## BERKSHIRE COUNTY — CONTINUED.

Adams, .	6	44	10	8	\$128 21	\$38 24	336-15	9-7	-	1	3	1	3	9-15	\$1,400 00
Alford, .	-	4	1	-	-	26 00	16-10	8-5	-	-	-	-	-	-	-
Becket, .	1	15	2	1	26 00	24 00	58-10	6-10	-	-	-	-	-	-	-

## SCHOOL RETURNS.

V

	10	-	-	3	3	31 06	86-12	8-12	-	1	1	20	Taxation,	9	432 00
Cheshire, .	8	-	-	3	-	31 00	33	8-5	-	-	-	-	-	-	-
Clarksburg, .	18	2	84 21	1	1	32 83	135-5	9	-	1	2	38	Taxation,	9-5	800 00
Dalton, .	5	1	40 00	1	1	34 00	25	8	-	-	-	-	-	-	-
Egremont, .	10	-	-	1	-	24 00	36	6	1	-	-	-	-	-	-
Florida, .	26	5	65 00	2	2	33 00	232-15	9-3	-	2	{ 2 1 }	{ 95 42 }	Taxation,	9-12	{ 1,250 00 800 00 }
Great Barrington, .	7	-	-	2	-	26 72	37-10	7-10	-	-	-	-	-	-	-
Hancock, .	13	1	63 15	1	-	29 00	107-15	9-5	-	1	1	32	Taxation,	9-10	600 00
Hinsdale, .	10	2	-	2	2	32 00	54-16	7-15	1	-	-	-	-	-	-
Lanesborough, .	3	20	76 66	1	1	33 50	139	9-5	-	1	2	74	Taxation,	10	1,500 00
Lee, .	17	7	80 00	-	-	31 81	115-5	8-17	-	1	1	49	Taxation,	9-15	800 00
Lenox, .	6	1	28 00	-	-	26 00	37-10	7-10	-	-	-	-	-	-	-
Monterey, .	2	-	-	-	-	24 00	14-15	7-7	-	-	-	-	-	-	-
Mt Washington, .	1	-	-	-	-	32 00	8-5	8-5	-	-	-	-	-	-	-
New Ashford, .	13	2	20 33	1	1	23 05	87-5	8-14	1	-	-	-	-	-	-
New Marlboro', .	66	4	69 00	4	4	40 29	418	9-3	-	2	6	165	Taxation,	{ 9-15 8-10 }	1,200 00 644 00
North Adams, .	10	1	20 00	-	-	20 00	47	5-17	1	-	-	-	-	-	-
Otis, .	5	1	20 00	-	-	19 50	22	5-10	-	-	-	-	-	-	-
Peru, .	92	5	123 60	9	-	38 40	257-8	10	-	1	6	206	Taxation,	10	1,800 00
Pittsfield, .	9	1	24 00	2	1	24 00	66-10	9-10	-	-	-	-	-	-	-
Richmond, .	5	5	21 13	-	-	20 75	66-15	7-9	-	-	-	-	-	-	-
Sandisfield, .	9	1	21 66	2	-	17 26	48	6	-	-	-	-	-	-	-
Savoy, .	15	2	52 50	1	1	26 15	125-12	8-18	-	1	2	39	Taxation,	9	472 50
Shethfield, .	26	2	92 31	5	5	53 68	87-10	9-14	-	1	2	39	Part tax,	9-15	1,200 00
Stockbridge, .	5	-	-	-	-	25 00	37-15	-	-	-	-	-	-	-	-
Tyringham, .	9	1	-	-	-	20 00	49	7	-	-	-	-	-	-	-
Washington, .	12	8	37 27	4	4	28 78	96-18	9-13	-	1	1	46	Taxation,	9-15	585 00
West Stockbridge, .	26	1	100 00	2	2	32 00	122-10	6-8	-	1	2	42	Taxation,	9-15	1,000 00
Williamstown, .	1	1	18 00	-	-	19 92	45-10	6-10	-	-	-	-	-	-	-
Windsor, .	12	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals, .	535	53	\$65 79	46	46	\$33 59	3,052-16	7-15	4	15	32	988	-	133-7	\$14,483 50

## BOARD OF EDUCATION.

## BARNSTABLE COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers and fire, fuel, care of rooms, for the school-year 1891-92.	Expense of supervision by school committee.	Salary of Superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Barnstable,	\$12,015 68	—	\$1,075 00	\$70 00	\$598 98	\$652 02	—	—	\$1,034 90	\$15,446 58
Bourne, .	4,951 00	\$67 00	189 00	—	603 00	—	—	—	314 00	6,124 00
Brewster,	2,015 74	120 00	—	22 50	300 26	148 00	—	—	237 45	2,843 95
Chatham, .	3,979 67	165 00	1,250 00	67 86	422 57	—	—	—	347 91	6,233 01
Dennis, .	6,388 91	150 00	842 63	22 50	725 87	—	\$1,947 72	—	880 20	10,957 83
Eastham, .	1,100 00	3 40	39 96	10 15	147 28	—	—	\$190 07	97 47	1,588 33
Falmouth,	7,500 00	89 00	1,200 00	41 70	752 30	496 41	—	1,413 05	444 34	11,936 80
Harwich, .	5,500 00	—	414 29	16 53	422 66	—	—	—	138 38	6,491 86
Nashpee, .	600 00	30 00	—	12 30	21 45	—	—	32 10	42 31	738 16
Orleans, .	2,000 00	28 76	101 00	16 65	196 58	159 00	—	—	85 80	2,587 79
Provincetown, .	9,000 00	225 00	360 32	10 00	752 12	—	—	300 00	400 00	11,047 44
Sandwich, .	4,943 63	22 50	200 00	25 00	207 26	10 24	—	—	247 13	5,655 76
Truro, .	1,700 00	88 75	—	22 00	207 00	—	—	—	200 00	2,217 75
Wellfleet, .	3,500 00	125 25	325 00	—	337 05	20 00	—	—	135 02	4,442 32
Yarmouth, .	3,700 00	100 00	—	12 00	597 14	350 00	—	—	123 07	4,882 21
Totals, .	\$68,894 63	\$1,214 66	\$5,997 20	\$349 19	\$6,291 52	\$1,835 67	\$1,947 72	\$1,935 22	\$4,727 98	\$93,193 79

## BERKSHIRE COUNTY — CONTINUED.

Adams, .	\$21,041 75	\$175 00	\$1,700 00	\$25 00	\$2,919 88	—	\$1,991 70	—	\$578 73	\$28,432 06
Alford, .	297 53	17 00	—	3 50	21 05	\$22 50	—	—	27 80	389 38

## SCHOOL RETURNS.

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Becket, . . . . .	1,335 00	2 14	141 19	15 00	51 00	-	-	\$3 69	12 00	1,560 02
Cheshire, . . . . .	3,000 00	55 00	225 00	14 66	200 00	-	-	-	350 00	3,844 66
Clarksburg, . . . . .	1,000 00	20 00	-	8 00	83 87	-	-	-	15 31	1,127 18
Dalton, . . . . .	6,865 39	195 00	375 00	18 50	800 00	-	-	-	319 80	8,673 69
Egremont, . . . . .	1,000 00	-	98 95	14 00	161 15	-	-	-	12 70	1,289 80
Florida, . . . . .	983 27	-	-	8 00	100 00	-	-	-	8 73	1,100 00
Gt. Barrington, . . . . .	11,000 60	114 65	-	26 00	761 98	-	-	-	84 40	11,987 03
Hancock, . . . . .	700 00	51 16	-	7 00	74 30	-	-	-	46 56	879 02
Hinsdale, . . . . .	3,600 00	-	356 40	-	185 58	-	-	75 00	158 64	4,375 62
Lanesborough, . . . . .	1,800 00	49 00	150 00	-	125 22	98 00	-	166 54	21 54	2,410 30
Lee, . . . . .	9,740 00	300 00	-	-	400 00	-	-	-	104 40	10,544 40
Lenox, . . . . .	5,100 00	210 00	-	15 00	500 00	-	-	1,450 00	700 00	7,975 00
Monterey, . . . . .	700 00	50 00	-	5 00	70 12	29 50	-	-	11 50	866 12
Mt Washington, . . . . .	60 00	21 00	-	-	4 16	-	-	-	1 00	86 16
New Ashford, . . . . .	150 00	40 00	-	10 00	26 00	57 00	-	-	-	283 00
New Marlboro', . . . . .	2,000 00	87 50	150 00	10 00	97 00	63 60	-	-	115 89	2,523 99
North Adams, . . . . .	29,623 60	538 00	2,000 00	92 25	1,858 10	-	-	1,945 74	3,059 56	39,117 25
Otis, . . . . .	900 00	82 80	-	4 50	84 43	-	-	-	1 50	1,073 23
Peru, . . . . .	300 00	15 00	-	5 00	25 00	-	-	-	4 00	349 00
Pittsfield, . . . . .	43,383 43	50 00	1,462 50	100 00	1,753 70	475 00	-	600 00	1,600 00	49,424 63
Richmond, . . . . .	1,756 03	42 00	120 29	-	191 27	-	-	-	78 96	2,188 55
Sandisfield, . . . . .	1,200 00	73 15	-	6 00	18 00	-	-	-	-	1,297 15
Savoy, . . . . .	600 00	34 50	-	8 00	61 70	-	-	-	11 25	715 45
Sheffield, . . . . .	3,828 02	322 94	-	25 00	357 56	-	-	45 11	20 70	4,599 33
Stockbridge, . . . . .	6,241 75	225 00	300 00	-	686 41	328 00	-	1,278 51	216 96	9,276 63
Tyringham, . . . . .	800 00	20 00	-	-	66 96	4 50	-	-	100 00	991 46
Washington, . . . . .	750 00	24 71	62 81	1 75	36 58	-	-	-	4 36	880 21
W. Stockbridge, . . . . .	3,700 00	100 00	187 50	30 25	465 75	-	-	151 59	84 22	4,719 31
Williamstown, . . . . .	7,193 89	115 00	-	42 00	778 48	168 00	-	804 58	404 65	9,506 60
Windsor, . . . . .	800 00	36 50	-	-	156 65	50 00	-	-	22 65	1,065 80
Totals, . . . . .	\$171,449 66	\$3,067 05	\$7,329 64	\$494 41	\$13,124 90	\$1,296 10	\$1,991 70	\$6,520 76	\$8,177 81	\$213,452 03

## BARNSTABLE COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Barnstable,	.	\$10,233 00	\$404 96	\$403 77	1	1	1	1	1	1	\$184 57	1
Bourne,	.	1	1	279 00	1	1	1	1	1	1	284 56	1
Brewster,	.	1	1	115 27	1	1	1	1	6	\$10 00	284 56	\$36 00
Chatham,	.	1	1	156 04	1	1	1	1	1	1	212 73	1
Dennis,	.	1	1	55 05	1	1	1	1	1	1	359 56	1
Eastham,	.	10,000 00	458 33	422 13	1	1	1	1	1	1	—	1
Falmouth,	.	1	1	168 59	1	1	1	1	1	1	184 56	1
Harwich,	.	1	1	61 76	1	1	1	1	1	1	342 64	21 45
Mashpee,	.	1	1	74 32	1	1	1	1	1	1	387 73	1
Orleans,	.	1	1	—	1	1	1	1	1	1	106 36	1
Provincetown,	.	4,500 00	—	259 90	1	1	1	1	1	1	312 73	1
Sandwich,	.	1	1	72 00	1	1	1	1	1	1	359 56	1
Truro,	.	1	1	79 09	1	1	1	1	1	1	312 73	100 00
Wellfleet,	.	15,000 00	900 00	366 00	1	1	1	1	1	1	184 56	1
Yarmouth,	.	1	1	—	1	1	1	1	1	1	—	1
Totals,	.	\$39,733 00	\$1,763 29	\$2,512 92	1	6	—	1	6	\$10 00	\$3,516 85	\$157 45

## BERKSHIRE COUNTY — CONCLUDED.

Adams,	.	1	1	—	1	25	—	—	—	—	\$275 00	1
Alford,	.	1	1	\$27 47	1	1	—	—	—	—	—	1



## SCHOOL RETURNS.

ix

Becket, .	-	-	-	83 59	-	-	-	-	-	-	-	275 00	-
Cheshire, .	-	-	-	-	-	-	-	-	-	-	-	284 56	\$10 00
Clarksburg, .	-	-	-	62 34	-	-	-	-	-	-	-	342 64	-
Dalton, .	-	-	-	-	-	-	-	-	-	-	-	106 36	25 00
Egremont, .	-	-	-	36 04	-	-	-	-	-	-	-	342 64	-
Florida, .	-	-	-	-	-	-	-	-	-	-	-	342 64	-
Gt. Barrington, .	-	-	-	844 79	-	-	-	-	-	2	72	10,000 00	-
Hancock, .	-	-	-	-	\$12 00	-	-	-	-	1	8	110 00	-
Hinsdale, .	-	-	-	-	14 82	-	-	-	-	-	-	284 56	-
Lanesborough, .	-	-	-	34 26	10 50	-	-	-	-	1	170	267 64	-
Lee, .	-	-	-	-	-	-	-	-	-	1	12	167 64	-
Lenox, .	-	-	-	-	-	-	-	-	-	1	400 00	50 00	-
Monterey, .	-	-	-	32 57	87 20	-	-	-	-	-	-	342 64	24 00
Mt. Washington, .	-	-	-	18 14	4 04	-	-	-	-	-	-	275 00	-
New Ashford, .	-	-	-	18 42	-	-	-	-	-	-	-	275 00	-
New Marlboro, .	-	-	-	296 98	-	-	-	-	-	-	-	256 36	-
North Adams, .	-	-	-	471 72	-	-	-	-	-	3	1,000	-	-
Otis, .	-	-	-	46 14	-	-	-	-	-	-	-	342 64	-
Peru, .	-	-	-	55 54	-	-	-	-	-	-	-	275 00	-
Pittsfield, .	-	-	-	-	-	-	-	-	-	5	150	-	-
Richmond, .	-	-	-	340 07	-	-	-	-	-	-	-	342 64	-
Sandisfield, .	-	-	-	-	77 40	-	-	-	-	-	-	359 56	-
Savoy, .	-	-	-	55 88	77 82	-	-	-	-	-	-	275 00	-
Sheffield, .	-	-	-	404 27	159 79	-	-	-	-	-	-	267 64	-
Stockbridge, .	-	-	-	-	298 06	-	-	-	-	1	10	106 36	35 00
Tyringham, .	-	-	-	-	-	-	-	-	-	-	-	359 56	-
Washington, .	-	-	-	47 69	-	-	-	-	-	-	-	359 56	-
W Stockbridge, .	-	-	-	104 68	-	-	-	-	-	-	-	312 73	-
Williamstown, .	-	-	-	-	-	-	-	-	-	1	10	117 64	-
Windsor, .	-	-	-	59 41	-	-	-	-	-	-	-	342 64	-
Totals, .	-	-	-	\$3,040 00	\$741 63	\$12,048 22	\$7,680 01	\$23,960 00	1,457	16	-	\$94 00	

## BOARD OF EDUCATION.

## BRISTOL COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The per cent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Acushnet, .	1,027	\$605,480	6	136	77	160	3	13	77	122	107	.87	6
Attleborough, .	7,577	4,224,250	26	1,248	772	1,555	18	126	881	1,160	1,015	.89	35
Berkley, .	894	377,625	7	151	102	159	5	11	87	132	113	.86	7
Dartmouth, .	3,122	1,757,900	21	523	336	576	7	37	361	473	401	.85	27
Dighton, .	1,889	755,200	11	259	200	340	2	17	200	263	227	.87	11
Easton, .	4,493	4,304,605	21	823	516	950	5	67	541	737	640	.87	32
Fairhaven, .	2,919	1,587,264	13	451	355	467	4	45	277	394	343	.87	14
Fall River, .	74,398	54,281,930	180	14,906	8,715	12,185	-	712	7,450	8,887	8,026	.90	256
Free town, .	1,417	856,299	7	197	125	231	6	18	125	180	132	.73	7
Mansfield, .	3,432	1,644,112	15	514	400	596	5	21	393	542	490	.90	16
New Bedford, .	40,733	38,518,943	120	7,891	4,375	6,383	1	704	3,444	5,024	4,520	.90	149
North Attleborough, .	6,727	3,757,314	28	1,175	719	1,421	-	111	794	1,159	1,063	.92	38
Norton, .	1,785	790,850	9	220	146	237	9	10	146	198	171	.86	9
Raynham, .	1,340	816,139	8	186	112	177	1	1	120	159	124	.77	8
Rehoboth, .	1,786	736,080	15	317	188	320	5	15	174	251	219	.86	15
Seekonk, .	1,317	867,879	8	262	147	249	1	11	147	200	172	.86	8
Somerset, .	2,106	1,004,677	9	320	209	372	2	25	212	293	267	.91	10
Swansea, .	1,456	778,875	10	219	130	240	4	17	130	186	163	.88	10
Taunton, .	25,448	18,070,550	85	4,258	2,476	4,646	-	341	2,497	3,827	3,479	.91	108
Westport, .	2,599	1,329,675	18	380	198	372	8	17	228	286	227	.80	18
Totals, .	186,465	\$137,065,647	617	34,436	20,298	31,636	86	2,319	18,284	24,473	21,899	.89	784

## DUKES COUNTY.

Chilmark, .	353	\$214,859	3	36	26	40	-	1	26	38	32	.84	3
Cottage City, .	1,080	1,561,450	4	166	93	178	-	15	88	122	102	.83	5
Edgartown, .	1,156	735,492	6	150	80	155	1	23	72	126	111	.88	6
Gay Head, .	139	18,103	1	25	17	29	-	4	17	29	20	.69	1
Gosnold, .	135	210,078	1	13	9	14	-	1	9	9	8	.88	1
Tisbury, .	1,506	1,032,709	6	191	114	211	1	-	26	173	146	.84	7
Totals, .	4,369	\$3,772,691	21	581	339	627	2	44	238	497	419	.84	23

## BRISTOL COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	Avg wages per month of male teachers in Public Schools.	Avg wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.					Salary of Principal.
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length. Months.	
Acushnet, .	1	6	4	3	\$40 00	\$35 00	50-15	8-10	-	1	4	114	Taxation,	10	\$1,340 00
Attleborough, .	4	37	13	9	80 00	40 87	234-4	9	-	1	-	-	-	-	-
Berkley, .	2	10	4	4	30 00	30 00	57-5	8-2	-	1	1	16	Taxation,	9	378 00
Dartmouth, .	1	26	4	2	30 00	29 69	178-5	8-5	-	1	1	-	-	-	-
Dighton, .	-	12	3	1	-	34 00	93-10	8-10	-	1	3	89	Taxation,	9-15	1,500 00
Easton, .	6	35	9	7	87 33	41 45	204-15	9-15	-	1	2	70	Taxation,	10	800 00
Fairhaven, .	1	21	11	11	100 00	39 00	126	9	-	1	16	472	Taxation,	10	3,000 00
Fall River, .	16	260	20	17	149 37	46 80	1764	9-10	-	1	-	-	-	-	-
Freetown, .	1	9	2	-	48 00	33 00	60	8	-	1	2	41	Taxation,	10	1,000 00
Mansfield, .	2	21	4	3	94 44	37 64	136	9-6	-	1	15	515	Taxation,	9-17	2,750 00
New Bedford, .	8	141	24	18	169 37	49 96	1201-2	9-17	-	1	3	80	Taxation,	10	1,200 00
N. Attleborough, .	2	54	27	25	107 00	41 57	257-7	9-4	-	1	-	-	-	-	-
Norton, .	-	15	2	-	-	36 00	81	9	-	-	-	-	-	-	-
Raynham, .	-	14	7	-	-	32 00	71	8-16	-	-	-	-	-	-	-
Rehoboth, .	-	20	3	-	-	29 50	120	8	-	-	-	-	-	-	-
Seekonk, .	-	13	7	3	-	33 65	69-4	8-11	-	-	-	-	-	-	-
Somerset, .	4	12	5	4	60 32	34 12	73	8-2	-	1	1	41	Taxation,	9	655 00
Swansea, .	2	8	6	5	32 00	31 00	90	9	-	-	-	-	-	-	-
Taunton, .	10	98	20	19	120 63	47 19	818	9-10	-	1	7	256	Taxation,	10	2,000 00
Westport, .	5	23	4	3	51 68	25 26	150	9	-	1	1	35	Taxation,	9	573 75
Totals, .	65	835	179	134	\$108 30	\$42 90	5,835-7	8-16	-	11	55	1,729	-	106-12	\$15,196 75

## DUKES COUNTY — CONTINUED.

[illegible]

## BOARD OF EDUCATION.

## BRISTOL COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, care of fires and school- rooms, for the school- year 1891-92.	Expense of supervision by school committee.	Salary of superin- tendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pu- pils.	Amount expended for new school-houses.	Amount expended for alterations and perma- nent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by tax- ation.
Acushnet, . . . . .	\$1,600 00	\$80 00	—	\$13 05	\$191 80	—	—	—	\$552 32	\$2,437 17
Attleborough, . . . . .	16,200 00	25 00	\$1,000 00	—	1,350 00	\$625 00	—	\$350 00	1,625 00	21,175 00
Berkley, . . . . .	1,423 00	90 50	—	15 00	185 00	—	—	224 00	100 00	2,037 50
Dartmouth, . . . . .	5,000 00	150 00	—	40 00	575 28	64 20	—	—	861 81	6,691 29
Dighton, . . . . .	3,200 00	—	175 00	—	218 15	—	—	—	262 83	3,855 98
Easton, . . . . .	11,000 00	—	1,000 00	—	1,664 05	759 62	—	—	843 32	15,266 99
Fairhaven, . . . . .	6,500 00	25 00	—	10 00	511 00	—	—	—	277 00	7,323 00
Fall River, . . . . .	163,570 06	1,203 66	2,500 00	343 00	21,186 19	615 75	\$22,134 46	—	12,600 75	224,153 87
Free town, . . . . .	2,000 00	100 00	—	9 00	333 15	85 40	—	10 00	100 00	2,637 55
Mansfield, . . . . .	7,827 84	150 00	600 00	50 00	1,335 78	14 00	24,874 97	127 27	102 49	35,082 35
New Bedford, . . . . .	103,008 67	1,000 00	3,000 00	107 00	4,124 59	—	27,982 65	6,978 93	6,697 10	132,898 94
N. Attleborough, . . . . .	17,450 00	150 00	1,162 50	35 00	1,408 16	—	—	—	976 98	21,182 64
Norton, . . . . .	2,500 00	100 00	—	—	461 54	—	—	—	160 69	3,222 23
Raynham, . . . . .	3,000 00	32 00	150 00	15 00	200 00	—	—	—	100 00	3,497 00
Rehoboth, . . . . .	3,500 00	—	260 00	—	—	—	—	—	400 00	4,160 00
Seekonk, . . . . .	2,200 00	75 00	76 59	10 00	300 58	—	1,339 32	489 74	—	4,491 23
Somerset, . . . . .	3,481 92	229 71	—	31 80	283 80	—	—	153 59	40 98	4,221 80
Swansea, . . . . .	3,130 15	—	199 57	20 00	280 75	—	—	—	77 51	3,707 98
Taunton, . . . . .	67,948 87	300 00	1,849 99	116 00	8,649 31	777 50	—	—	5,000 00	84,641 67
Westport, . . . . .	4,500 00	215 00	—	30 00	258 00	88 00	—	166 00	281 00	5,538 00
Totals, . . . . .	\$29,040 51	\$3,925 87	\$11,973 65	\$844 85	\$43,517 13	\$3,029 47	\$76,331 40	\$8,499 53	\$31,059 78	\$608,222 19



## SCHOOL RETURNS.

XV

## DUKES COUNTY — CONTINUED.

Chilmark, .	\$350 00	\$42 00	—	—	\$34 95	—	—	—	\$35 83	\$462 78
Cottage City, .	2,185 00	75 00	—	—	300 00	—	—	—	191 21	2,819 71
Edgartown, .	1,950 37	50 00	—	—	218 53	—	—	—	123 77	2,627 67
Gay Head, .	75 00	25 00	—	—	13 75	—	—	—	128 72	247 97
Gosnold, .	100 00	30 00	—	—	11 19	—	—	—	4 00	148 19
Tisbury, .	2,500 00	72 93	—	—	266 72	—	—	—	27 80	3,187 70
Totals, .	\$7,160 37	\$294 93	—	—	\$845 14	—	—	—	\$511 33	\$9,494 02

## BRISTOL COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Acushnet, . . .	\$600 00	-	-	\$150 91	1	-	-	2	20	\$400 00	\$267 64	-
Attleborough, . .	-	-	-	771 06	1	-	-	-	-	-	-	-
Berkley, . . .	-	-	-	118 86	1	-	-	-	-	-	387 73	-
Dartmouth, . . .	-	\$80 80	-	229 19	1	-	-	-	-	-	156 36	-
Dighton, . . .	-	-	-	204 68	1	-	-	-	-	-	284 56	-
Easton, . . .	-	7,489 73	-	643 89	1	-	-	-	-	-	-	-
Fairhaven, . . .	-	-	-	368 84	1	-	-	-	-	-	184 56	-
Fall River, . . .	2,471 00	2,525 16	-	-	14	3,744	-	-	-	10,000 00	-	-
Freetown, . . .	-	-	-	189 75	1	-	-	-	-	-	267 64	-
Mansfield, . . .	-	50 00	-	467 73	1	-	-	-	-	-	184 56	-
New Bedford, . .	-	3,000 00	-	1,291 91	1	73	\$5,000 00	13	2,229	8,500 00	-	-
N. Attleborough, .	-	-	-	992 33	1	120	4,671 00	-	-	-	-	\$26 00
Norton, . . .	-	-	-	298 48	1	-	-	-	-	-	267 64	66 91
Raynham, . . .	-	-	-	263 84	1	-	-	-	-	-	284 56	-
Rehoboth, . . .	-	-	-	297 42	1	-	-	1	25	256 00	284 56	10 00
Seekonk, . . .	-	465 00	-	225 46	1	-	-	-	-	-	267 64	27 86
Somerset, . . .	-	-	-	286 76	1	-	-	-	-	-	167 64	45 00
Swansea, . . .	-	-	-	228 69	1	130	6,000 00	2	30	1,800 00	267 64	-
Taunton, . . .	-	-	-	-	1	-	-	-	-	-	-	-
Westport, . . .	-	-	-	326 84	1	-	-	-	-	-	167 64	-
Totals, . . .	\$3,071 00	\$212,000 00	\$13,610 69	\$7,356 64	3	323	\$15,671 00	32	6,048	\$20,956 00	\$3,440 37	\$175 77

## SCHOOL RETURNS.

xvii

## DUKES COUNTY — CONCLUDED.

Chilmark, .	-	-	-	\$14 92	-	-	-	-	-	-	-	\$275 00	-
Cottage City, .	-	-	-	-	-	-	-	-	-	-	-	100 00	-
Edgartown, .	-	-	-	-	-	-	-	1	-	10	-	256 36	-
Gay Head, .	-	-	-	-	-	-	-	-	-	-	-	275 00	\$13 75
Gosnold, .	-	-	-	-	-	-	-	-	-	-	-	275 00	-
Tisbury, .	-	-	-	39 10	1	9	-	-	-	-	-	256 36	-
Totals, .	-	-	-	\$54 02	1	9	-	1	10	\$100 00	\$1,437 72	\$13 75	

## ESSEX COUNTY.

TOWNS.	Population—U. S. Cen- sus, 1890.	Valuation — 1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Pub- lic Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The per cent. of attend- ance based upon the average membership.	No. of teachers required by the Public Schools.
Amesbury, . . . . .	6,798	\$4,522,188	27	1,633	920	1,191	1	92	520	1,057	911	.86	30
Andover, . . . . .	6,142	4,353,616	30	989	657	1,146	9	130	653	982	873	.89	36
Beverly, . . . . .	10,821	13,186,755	38	1,762	1,018	1,836	-	140	1,043	1,806	1,513	.83	44
Boxford, . . . . .	865	704,143	6	142	91	144	-	5	88	118	106	.89	6
Bradford, . . . . .	3,720	2,046,476	15	650	391	641	-	145	481	640	593	.92	20
Danvers, . . . . .	7,454	4,009,674	23	1,152	710	1,357	-	137	789	1,195	1,049	.88	29
Essex, . . . . .	1,713	864,240	10	222	193	282	3	22	193	250	228	.91	10
Georgetown, . . . . .	2,117	1,030,035	11	390	130	404	-	20	125	315	271	.87	12
Gloucester, . . . . .	24,651	14,206,071	89	3,939	2,602	4,282	8	446	2,255	3,691	3,577	.97	111
Groveland, . . . . .	2,191	899,983	10	371	225	434	-	30	253	358	336	.93	11
Hamilton, . . . . .	961	871,537	5	141	85	149	3	5	82	119	102	.85	5
Haverhill, . . . . .	27,412	19,780,321	86	4,610	2,383	3,775	5	341	1,898	3,049	2,845	.93	103
Ipswich, . . . . .	4,439	2,435,239	18	737	488	736	-	105	436	636	576	.90	22
Lawrence, . . . . .	44,654	31,520,273	113	8,776	5,088	6,565	8	404	4,044	5,193	4,919	.94	129
Lynn, . . . . .	55,727	44,764,672	174	8,945	5,418	8,876	-	839	5,213	8,112	6,988	.86	189
Lynnfield, . . . . .	787	594,613	4	108	69	120	1	7	73	98	84	.86	4
Manchester, . . . . .	1,789	7,104,390	6	213	130	231	-	18	146	223	207	.92	7
Marblehead, . . . . .	8,202	5,045,832	16	1,057	759	1,243	-	125	692	1,185	1,098	.92	27
Merrimac, . . . . .	2,633	1,460,820	15	563	305	561	6	45	377	496	474	.96	17
Methuen, . . . . .	4,814	3,232,503	22	886	532	963	8	69	527	819	764	.93	25
Middleton, . . . . .	924	566,669	5	164	101	215	5	20	139	139	115	.83	5
Nabant, . . . . .	880	4,623,538	4	127	81	143	-	21	81	124	114	.92	5
Newbury, . . . . .	1,427	949,446	7	224	126	215	5	5	214	198	174	.87	7

## SCHOOL RETURNS.

XIX

Newburyport, .	13,947	9,702,058	37	2,476	1,750	1,801	4	141	1,060	1,484	1,335	.90	40
North Andover, .	3,742	2,716,642	19	672	324	757	8	50	421	615	558	.90	22
Peabody, .	10,158	7,441,200	39	1,870	1,135	2,075	-	137	1,211	1,846	1,677	.90	45
Rockport, .	4,087	2,134,768	15	621	384	755	-	30	383	644	606	.94	16
Rowley, .	1,248	602,984	7	203	114	210	1	8	113	169	148	.87	7
Salem, .	30,801	26,228,718	93	5,399	3,340	3,792	-	425	2,277	3,684	3,204	.87	106
Salisbury, .	1,316	582,720	6	212	132	204	2	1	145	179	158	.88	6
Saugus, .	3,673	2,644,972	15	686	464	758	-	37	537	637	565	.88	17
Swampscott, .	3,198	4,893,723	11	349	203	488	-	51	324	391	364	.93	13
Topsfield, .	1,022	1,037,982	5	163	129	166	2	13	120	142	121	.85	5
Wenham, .	886	578,110	5	132	68	136	5	2	68	101	90	.89	5
West Newbury, .	1,796	899,498	10	284	185	310	-	28	182	252	230	.91	10
Totals, .	299,995	\$228,196,399	996	50,928	30,730	46,961	84	4,094	27,143	40,947	36,973	.90	1,146

## BOARD OF EDUCATION.

## ESSEX COUNTY — CONTINUED.

TOWNS.	HIGH SCHOOLS.														
	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	A'v'ge wages per month of male teachers in Public Schools.	A'v'ge wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	No. of High Schools.			How supported.	Length.	Salary of Principal.
										No. of teachers.	No. of pupils.	No. of Schools.			
Amesbury, .	1	43	18	-	\$150 00	\$42 00	263-10	9-15	-	1	4	94	Taxation,	10	\$1,500 00
Andover, .	3	33	17	5	170 00	46 00	285	9-10	-	1	4	105	Not by tax,	9-10	1,800 00
Beverly, .	2	42	14	14	100 00	38 28	380	10	1	1	6	221	Taxation,	10	1,500 00
Boxford, .	-	7	2	1	-	32 50	49-5	8-3	-	-	-	-	-	-	-
Bradford, .	1	22	3	3	131 56	36 84	126-19	9-3	-	1	3	77	Taxation,	9-6	1,300 00
Danvers, .	4	29	18	15	121 59	40 00	212	9-5	-	1	3	113	Taxation,	10	1,400 00
Essex, .	1	10	6	3	90 00	28 51	81	8-3	-	1	1	44	Taxation,	8-10	765 00
Georgetown, .	1	17	4	2	112 00	41 50	97	8-18	-	1	2	45	Taxation,	9	1,000 00
Gloucester, .	6	110	20	16	136 67	39 47	838	9-10	-	1	11	322	Taxation,	9-15	2,100 00
Groveland, .	1	13	8	8	85 00	34 40	100	10	-	1	1	50	Taxation,	10	850 00
Hamilton, .	1	8	5	3	34 00	34 00	45	9	-	-	-	-	-	-	-
Haverhill, .	5	98	12	12	143 75	50 00	796	9-3	-	1	8	276	Taxation,	10	2,000 00
Ipswich, .	3	25	9	6	135 00	35 00	172	9-10	-	1	2	56	Part tax, .	10	1,500 00
Lawrence, .	9	128	7	4	158 57	52 81	1120	10	-	1	9	291	Taxation,	10	2,500 00
Lynn, .	14	175	163	70	147 00	63 75	1670	9-12	-	2	23	627	Taxation,	9-12	2,500 00 2,000 00
Lynnfield, .	-	8	7	6	-	36 00	34	8-10	-	-	-	-	-	-	-
Manchester, .	2	7	6	6	100 00	45 60	59-13	9-18	-	1	2	51	Taxation,	10	1,000 00
Marblehead, .	3	31	12	8	126 83	39 56	164	10-5	-	1	3	148	Taxation,	10-5	1,200 00
Merrimac, .	1	21	7	5	105 27	38 15	133-15	8-18	-	1	2	56	Taxation,	9-10	1,000 00
Methuen, .	2	23	5	1	105 25	38 00	202-15	9	-	1	3	82	Taxation,	9	1,000 00
Middleton, .	-	6	5	5	-	39 00	46-10	9-5	-	-	-	-	-	-	-
Nahant, .	2	4	3	2	126 71	62 16	36-16	9-9	-	1	2	25	Taxation,	9-4	1,172 10



## SCHOOL RETURNS.

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	13	3	5	102 00	28 60	63	9	1	28	119	3,579	Part tax, Taxation,	10	1,600 00
Newbury, .	41	8	5	102 00	41 61	370	10	1	1	5	156	Taxation,	10-5	1,600 00
Newburyport, .	20	2	-	85 09	38 52	185-5	9-15	-	1	2	51	Taxation,	10	1,085 00
North Andover, .	43	32	29	118 00	43 72	390	10	-	1	4	95	Taxation,	9-10	1,500 00
Peabody, .	21	6	5	84 21	39 00	142-10	9-10	-	1	2	84	Taxation,	-	800 00
Rockport, .	7	2	1	-	25 55	63	9	-	1	-	-	-	-	-
Rowley, .	97	82	71	157 22	55 05	916-1	8-17	-	1	11	317	Taxation,	10	2,200 00
Salem, .	6	2	2	60 00	28 00	52-10	8-15	-	1	1	29	Taxation,	8-15	525 00
Salisbury, .	16	11	8	115 80	41 00	142-10	9-10	-	1	2	72	Taxation,	9-10	1,100 00
Saugus, .	13	8	8	160 00	49 58	110	10	-	1	2	56	Taxation,	10	1,600 00
Swampscott, .	6	2	1	50 00	32 00	44	8-16	-	-	-	-	-	-	-
Topsfield, .	8	4	3	-	32 73	45	9	-	-	-	-	-	-	-
Wenham, .	13	1	1	68 50	29 25	80	8	-	1	1	36	Taxation,	9	717 03
West Newbury, .														
Totals, .	91	514	329	\$129 17	\$46 58	9516-19	9-5	1	28	119	3,579	-	260-12	\$39,214 13

## ESSEX COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, care of fires and school-rooms, for the school-year 1891-2.	Expense of supervision by school committee.	Salary of superintendent of public schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Amesbury,	\$13,251 35	\$500 00	—	—	\$1,416 35	—	—	—	—	\$15,167 70
Andover, .	16,000 00	—	\$1,300 00	\$150 00	2,696 88	—	—	\$3,250 00	1,200 00	22,900 00
Beverly, .	21,349 98	73 20	—	55 00	2,696 88	\$476 47	—	6,373 28	1,612 00	32,636 81
Boxford, .	1,500 00	100 00	—	19 00	226 99	—	—	—	270 49	2,116 48
Bradford,	8,700 00	300 00	—	12 60	766 02	38 00	\$4,582 00	2,525 13	86 16	17,009 91
Danvers, .	15,207 00	684 00	—	—	1,284 00	—	—	788 00	1,213 00	19,176 00
Essex, .	3,000 00	180 00	—	32 00	306 24	40 00	12,284 00	—	109 57	15,951 81
Georgetown,	5,300 00	205 00	—	50 00	450 00	—	—	—	300 00	6,305 00
Gloucester,	55,893 97	323 40	2,200 00	215 00	3,461 30	350 00	—	—	6,352 62	68,796 29
Groveland,	4,350 00	185 00	—	90 00	373 55	—	—	—	287 16	5,285 71
Hamilton,	1,659 25	55 00	—	14 50	332 96	—	—	336 91	58 66	2,457 28
Haverhill,	63,575 40	—	2,000 00	115 20	7,166 80	533 61	65,095 80	—	5,508 63	143,995 44
Ipswich, .	8,650 00	350 00	—	20 00	733 36	—	—	500 00	376 35	10,629 71
Lawrence,	86,652 13	—	2,500 00	192 00	4,661 31	—	—	7,499 42	5,984 29	107,489 15
Lynn, .	134,865 76	1,200 00	2,750 00	490 83	9,259 82	—	179,119 66	7,349 67	7,341 39	342,377 13
Lynnfield,	1,000 00	95 00	—	50 00	118 48	—	—	—	39 97	1,303 45
Manchester,	4,906 07	106 00	500 00	27 50	499 67	759 00	—	1,034 89	297 17	8,130 30
Marblehead,	16,470 19	—	1,568 18	118 28	1,463 96	—	—	—	1,831 49	21,452 10
Merrimac,	7,069 51	150 00	—	40 00	811 88	—	—	713 04	431 76	9,219 19
Methuen, .	11,063 73	400 00	—	—	713 89	—	—	300 00	997 88	13,475 50
Middleton,	1,600 00	100 00	—	16 00	353 00	—	—	182 00	167 00	2,418 00
Nahant, .	4,174 71	275 00	—	100 25	247 43	—	—	—	169 82	4,967 21
Newbury,	2,450 00	60 00	—	11 00	749 88	208 00	—	—	15 50	3,494 38

Newburyport, .	21,461 63	-	1,000 00	75 15	2,142 47	-	-	600 00	400 00	25,679 25
North Andover, .	10,890 00	400 00	-	-	876 67	-	-	744 26	629 63	13,540 56
Peabody, .	30,500 00	917 40	-	58 03	2,032 58	-	1,853 92	8,952 70	1,192 53	45,507 16
Rockport, .	6,583 58	-	696 44	24 95	479 51	-	-	600 00	1,540 68	9,925 16
Rowley, .	1,948 80	75 00	-	-	234 86	-	-	27 20	62 85	2,348 71
Salem, .	81,311 10	1,200 00	625 00	133 75	7,013 19	-	-	4,725 67	7,502 04	102,510 75
Salisbury, .	1,991 95	65 00	-	-	232 43	9 50	-	-	416 47	2,715 35
Saugus, .	9,500 00	250 00	-	66 00	874 00	-	-	-	210 00	10,900 00
Swampscott, .	9,114 48	300 00	-	9 50	737 31	-	-	109 86	573 73	10,844 88
Topsfield, .	1,800 00	100 00	-	13 20	123 63	-	-	70 53	49 40	2,156 76
Wenham, .	1,400 00	111 00	-	32 00	108 26	-	-	13 50	65 57	1,730 33
West Newbury, .	3,387 53	126 70	-	5 00	327 26	-	-	303 37	150 00	4,359 86
Totals, .	\$668,578 12	\$8,886 70	\$15,139 62	\$2,236 74	\$54,275 94	\$2,414 58	\$202,935 38	\$47,059 43	\$47,446 81	\$1,108,973 32

## ESSEX COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Amesbury.	.	\$370,000 00	\$1,700 00	—	1	490	\$25,500 00	1	42	\$350 00	—	—
Andover.	.	3,000 00	180 00	365 94	2	—	—	2	40	2,800 00	—	—
Beverly.	.	3,589 40	179 47	267 64	1	—	—	1	35	—	\$267 64	—
Boxford.	.	—	—	—	—	168	9,200 00	2	39	2,750 00	156 37	—
Bradford.	.	—	—	—	—	—	—	1	24	1,000 00	—	—
Danvers.	.	—	—	466 24	—	—	—	1	—	—	256 36	—
Essex.	.	—	—	133 27	—	—	—	1	12	90 00	184 56	—
Georgetown.	.	—	—	196 74	—	—	—	3	350	1,500 00	—	\$75 00
Gloucester.	.	—	—	1,450 05	—	—	—	—	—	—	—	—
Groveland.	.	—	—	—	—	—	—	—	—	—	267 64	—
Hamilton.	.	—	—	84 02	—	—	—	—	—	—	200 00	—
Haverhill.	.	—	—	—	—	—	—	4	1,200	—	—	—
Ipswich.	.	72,000 00	3,077 00	358 08	—	—	—	5	2,090	4,274 46	134 56	—
Lawrence.	.	—	—	—	—	—	—	5	700	3,500 00	—	—
Lynn.	.	—	—	83 09	—	—	—	—	—	—	200 00	—
Lynnfield.	.	—	—	—	—	—	—	—	—	—	—	—
Manchester.	.	10,000 00	—	383 92	—	—	—	—	—	—	184 56	—
Marblehead.	.	—	—	160 62	—	—	—	—	—	—	—	—
Merrimac.	.	—	—	387 00	—	—	—	1	40	200 00	—	—
Methuen.	.	—	—	83 56	—	—	—	—	—	—	256 36	—
Middleton.	.	—	—	—	—	—	—	—	—	—	—	—
Nahant.	.	—	—	—	—	—	—	—	—	—	—	—
Newbury.	.	—	—	107 23	1	26	—	—	—	—	267 64	—

## SCHOOL RETURNS.

XXV

Newburyport, .	-	65,000 00	3,675 00	-	1	71	-	3	615	3,000 00	-	-
North Andover,	-	4,000 00	176 90	-	-	-	-	-	-	-	162 73	-
Peabody, .	-	10,000 00	640 00	714 46	-	-	-	1	12	170 00	-	-
Rockport, .	-	-	-	-	-	-	-	-	-	-	50 00	-
Rowley, .	-	-	-	-	-	-	-	-	-	-	267 64	-
Salem, .	-	25,425 00	1,525 50	2,381 13	-	-	-	18	1,439	10,000 00	-	-
Salisbury, .	-	-	-	116 52	-	-	-	1	13	300 00	284 56	-
Saugus, .	-	-	-	-	-	-	-	-	-	-	106 36	-
Swampscott, .	-	-	-	-	-	-	-	-	-	-	-	-
Topsfield, .	-	-	-	115 12	-	-	-	-	-	-	100 00	-
Wenham, .	-	-	-	135 55	-	-	-	-	-	-	267 64	-
West Newbury, .	-	-	-	113 36	-	-	-	-	-	-	284 56	32 00
Totals, .	-	\$563,014 40	\$11,153 87	\$8,243 54	5	755	\$34,700 00	49	6,651	\$29,934 46	\$3,899 18	\$107 00

## FRANKLIN COUNTY.

TOWNS.	Population—U. S. Cen- sus, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Pub- lic Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attend- ance based upon the average membership.	No. of teachers required by the Public Schools.
Ashfield, .	1,025	\$481,895	10	117	87	179	3	41	84	146	132	.90	11
Barnardston, .	770	381,419	6	126	56	127	2	5	56	91	82	.90	6
Buckland, .	1,570	539,496	9	231	180	295	15	15	180	242	210	.87	9
Charlemont, .	972	349,906	10	196	125	219	2	21	112	184	161	.87	10
Colrain, .	1,671	559,609	17	366	224	381	3	28	224	289	263	.91	17
Conway, .	1,451	728,703	12	243	149	305	4	46	169	237	214	.90	13
Deerfield, .	2,910	1,414,626	19	495	332	520	6	27	329	491	440	.89	19
Erving, .	972	371,088	5	185	116	200	5	8	150	138	129	.93	5
Gill, .	960	480,153	7	129	76	146	3	14	86	113	98	.87	7
Greenfield, .	5,252	4,777,764	25	910	638	1,118	—	68	676	924	839	.91	31
Hawley, .	515	151,096	7	88	56	97	—	9	56	83	73	.88	7
Heath, .	503	161,324	7	105	62	117	1	14	62	102	99	.97	7
Leverett, .	702	284,476	5	120	84	133	1	10	84	119	99	.83	5
Leyden, .	407	173,950	6	54	37	74	2	14	36	50	45	.90	6
Monroe, .	282	141,914	3	46	34	56	4	6	34	45	41	.91	3
Montague, .	6,296	3,359,087	26	1,259	710	1,186	6	96	686	1,088	979	.89	30
New Salem, .	856	288,450	8	125	84	146	3	6	94	107	97	.90	8
Northfield, .	1,889	827,301	10	234	128	318	5	36	151	224	194	.86	10
Orange, .	4,568	2,211,634	23	780	480	967	1	133	567	762	724	.95	25
Rowe, .	541	194,358	6	92	45	84	2	14	36	69	60	.88	6
Shelburne, .	1,553	880,339	11	197	92	219	3	19	92	189	177	.94	10
Shutesbury, .	453	148,381	6	86	59	97	4	7	59	90	82	.91	6
Sunderland, .	663	406,758	4	86	62	116	—	14	60	90	84	.92	4



# SCHOOL RETURNS.

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Warwick, .	565	280,880	9	91	62	98	2	7	62	87	83	.95	9
Wendell, .	505	225,513	4	89	52	90	1	3	52	67	62	.92	4
Whately, .	779	402,410	6	189	103	137	3	12	88	111	98	.88	6
Totals, .	38,610	\$20,222,530	261	6,639	4,133	7,425	66	673	4,285	6,138	5,565	.90	274

## HAMPDEN COUNTY.

Agawam, .	2,352	\$1,226,298	12	432	300	469	1	31	300	434	393	.90	12
Blandford, .	871	384,870	10	170	130	201	2	30	134	155	132	.85	10
Brimfield, .	1,096	408,510	9	156	98	155	3	-	106	126	116	.92	9
Chester, .	1,295	520,375	10	234	126	232	1	10	105	168	150	.89	10
Chicopee, .	14,050	6,620,160	31	2,544	1,612	1,887	-	221	1,091	1,349	1,284	.94	36
Granville, .	1,061	350,533	10	163	108	173	2	13	108	174	149	.86	9
Hampden, .	831	404,823	6	140	79	150	4	9	96	95	81	.85	6
Holland, .	201	95,860	2	26	20	29	-	1	20	30	27	.90	2
Holyoke, .	35,637	22,943,940	78	7,144	4,162	4,604	26	265	2,840	3,339	3,072	.92	104
Longmeadow, .	2,183	1,068,022	11	347	234	361	5	17	236	295	264	.89	12
Ludlow, .	1,939	890,149	14	351	307	463	7	29	307	294	255	.90	14
Monson, .	3,650	1,761,100	20	638	368	630	12	12	369	514	467	.90	20
Montgomery, .	266	144,540	4	33	30	44	1	9	30	37	30	.81	4
Palmer, .	6,520	2,552,033	32	1,179	832	1,326	6	28	726	949	851	.89	32
Russell, .	879	512,138	7	178	102	192	1	5	103	178	132	.74	8
Southwick, .	914	513,702	8	116	82	182	2	17	114	142	120	.84	8
Springfield, .	44,179	48,329,634	129	7,131	4,131	7,214	21	662	3,887	5,128	4,733	.92	157
Tolland, .	393	162,188	6	41	45	72	2	7	44	59	56	.94	6
Wales, .	700	283,985	5	147	92	153	-	5	97	113	97	.85	5
Westfield, .	9,805	6,969,750	34	1,661	957	1,899	5	305	998	1,464	1,359	.92	48
West Springfield, .	5,077	3,426,359	23	956	643	1,253	15	145	627	894	811	.90	27
Wilbraham, .	1,814	758,025	9	219	136	296	1	20	193	203	177	.87	10
Totals, .	135,713	\$100,326,994	470	24,009	14,594	21,985	117	1,841	12,534	16,140	14,756	.91	549

## FRANKLIN COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	A'v'g wages per month of male teachers in Public Schools.	A'v'g wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.					Salary of Principal.
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length.	
Ashfield, .	—	12	1	1	—	\$28 73	69-15	6-19	—	1	2	46	Part tax, .	9	\$700 00
Barnardston, .	1	7	1	1	\$26 00	26 85	48	8	—	1	2	80	Part tax, .	9	850 00
Buckland, .	—	12	1	1	—	30 20	74-5	8-5	—	—	—	—	—	—	—
Charlemont, .	—	16	1	1	—	23 19	64	6-4	—	—	—	—	—	—	—
Colrain, .	1	24	2	—	24 00	22 15	124-5	7-6	—	—	—	—	—	—	—
Conway, .	—	17	4	1	—	27 50	79-10	6-12	2	1	2	54	Taxation, .	9	450 00
Deerfield, .	1	27	6	5	40 00	32 00	142	7-9	—	1	1	30	Taxation, .	9	396 00
Erving, .	—	8	3	3	—	36 00	42	8-8	—	—	—	—	—	—	—
Gill, .	—	9	1	1	—	26 28	59-5	8-9	—	—	—	—	—	—	—
Greenfield, .	2	29	2	2	161 11	37 41	225	9	—	1	4	114	Taxation, .	9	1,450 00
Hawley, .	—	11	1	1	—	20 50	42	6	—	—	—	—	—	—	—
Heath, .	1	11	—	—	30 00	22 41	42	8	—	—	—	—	—	—	—
Leverett, .	—	7	—	—	—	26 26	40	8	—	—	—	—	—	—	—
Leyden, .	—	11	2	—	—	26 19	35-5	7-5	1	—	—	—	—	—	—
Monroe, .	—	5	2	1	—	15 75	22-10	7-10	—	—	—	—	—	—	—
Montague, .	2	34	18	15	125 00	38 00	234	9	—	2	4	92	Taxation, .	9	{ 1,000 00 600 00
New Salem, .	1	12	3	3	28 00	25 75	52-5	6-15	1	—	—	—	—	—	—
Northfield, .	—	11	2	1	—	32 30	76	7-6	—	—	—	—	—	—	—
Orange, .	1	40	16	7	105 00	34 00	192	8-8	3	1	2	64	Taxation, .	9-10	1,000 00
Rowe, .	—	10	2	—	—	23 00	39-10	6-11	—	—	—	—	—	—	—
Shelburne, .	—	12	1	—	—	33 00	83-10	7-12	—	—	—	—	—	—	—
Shutesbury, .	—	8	1	—	—	21 48	36	6	—	—	—	—	—	—	—
Sunderland, .	—	4	—	—	—	38 25	34	8-10	—	—	—	—	—	—	—



## BOARD OF EDUCATION.

## FRANKLIN COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, care of rooms, for the school-year 1891-92.	Expense of supervision by school committee.	Salary of superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Ashfield, .	\$1,800 00	\$70 00	—	\$7 00	\$100 00	—	—	—	\$76 25	\$2,053 25
Barnardston, .	2,500 00	82 00	—	—	120 37	—	—	—	17 96	2,270 33
Buckland, .	2,500 00	142 50	—	15 00	374 76	—	—	—	50 01	3,082 27
Charlemont, .	1,200 00	90 00	\$258 30	7 50	182 62	—	—	\$2,341 62	44 11	4,124 15
Colrain, .	2,600 00	155 50	—	10 00	195 06	\$20 00	—	—	321 10	3,301 66
Conway, .	2,486 37	75 00	229 20	9 75	476 17	156 00	—	101 05	79 04	3,612 58
Deerfield, .	5,000 00	300 00	—	25 00	800 00	—	—	—	300 00	6,425 00
Erving, .	1,300 00	38 25	—	16 00	138 12	83 75	—	—	30 47	1,983 26
Gill, .	1,500 00	80 00	—	8 00	146 15	—	—	151 11	—	1,734 15
Greenfield, .	13,038 28	550 00	—	30 00	1,559 67	7 00	—	3,790 59	1,614 72	20,590 26
Hawley, .	900 00	19 00	120 00	9 00	99 99	60 00	—	286 93	21 00	1,515 92
Heath, .	900 00	40 00	61 82	8 75	147 87	36 00	—	—	2 25	1,196 69
Leverett, .	775 00	82 00	—	5 00	180 00	9 50	—	—	86 00	1,137 50
Leyden, .	500 00	50 00	—	10 00	105 00	50 00	—	—	117 00	832 00
Monroe, .	200 00	52 98	—	7 00	85 40	—	—	300 00	—	645 38
Montague, .	12,691 73	450 00	—	20 00	1,483 09	1,142 50	—	350 00	837 43	16,974 75
New Salem, .	1,210 00	45 00	—	6 00	128 53	25 00	—	98 63	71 09	1,584 25
Northfield, .	2,800 00	176 00	—	30 00	300 00	48 00	\$700 00	—	300 00	4,354 00
Orange, .	9,200 00	315 00	1,058 00	46 00	1,082 00	331 00	—	—	720 00	12,782 00
Rowe, .	600 00	35 00	147 35	9 75	55 45	—	500 00	—	—	1,347 55
Shelburne, .	3,000 00	100 00	—	20 00	306 37	13 00	—	151 10	63 92	3,654 39
Shutesbury, .	500 00	55 00	—	10 00	114 59	11 00	—	—	42 80	733 39
Sunderland, .	1,500 00	63 00	99 75	9 50	246 01	362 75	—	1,000 00	56 34	3,337 35

## SCHOOL RETURNS.

xxxix

Warwick, .	810 00	—	60 00	11 00	42 54	—	—	15 95	939 49
Wendell, .	617 43	30 00	69 44	10 80	45 50	96 00	—	26 79	895 96
Whately, .	1,200 00	75 00	113 00	—	200 00	—	125 00	—	1,713 00
Totals, .	\$70,878 81	\$3,171 23	\$2,472 42	\$341 05	\$8,715 26	\$2,451 50	\$1,200 00	\$4,894 23	\$102,820 53

## HAMPDEN COUNTY — CONTINUED.

Agawam, .	\$4,275 07	—	—	—	\$481 60	—	—	\$72 79	\$1,829 46
Blandford, .	1,850 00	\$70 00	—	—	152 69	\$50 00	—	169 42	2,292 11
Brimfield, .	1,400 00	58 00	\$225 00	\$10 00	225 05	26 30	—	98 13	2,042 48
Chester, .	1,600 00	85 00	168 60	—	232 49	—	—	—	2,086 09
Chicopee, .	19,898 39	—	1,800 00	—	2,953 62	165 00	\$1,000 50	671 08	40,024 98
Granville, .	2,150 00	272 82	—	—	174 72	148 00	—	16 17	2,761 71
Hampden, .	1,300 00	115 00	—	22 00	111 86	—	38 63	—	1,587 49
Holland, .	200 00	25 00	—	5 00	1 75	95 00	29 00	2 00	357 75
Holyoke, .	74,748 52	420 00	2,559 92	125 00	7,148 31	—	13,758 09	3,450 58	102,210 42
Longmeadow, .	4,223 56	—	290 18	—	423 81	68 70	86 98	136 10	5,239 33
Ludlow, .	3,900 00	150 00	—	16 00	300 00	—	—	200 00	4,566 00
Moulton, .	6,100 00	199 25	525 00	45 00	662 99	—	—	430 00	9,309 33
Montgomery, .	500 00	19 00	—	7 00	86 05	—	1,347 09	1 82	613 87
Palmer, .	13,100 00	533 32	—	10 00	1,340 05	1,279 63	1,784 41	1,037 40	20,784 81
Russell, .	1,302 31	46 00	—	—	169 36	—	—	148 33	1,666 00
Southwick, .	1,500 00	184 00	—	20 00	105 28	196 20	—	66 63	2,072 11
Springfield, .	132,111 07	812 50	3,500 00	154 75	17,457 53	—	11,241 92	8,771 58	250,101 54
Tolland, .	500 00	34 00	—	3 25	40 82	—	—	—	644 57
Wales, .	700 00	33 00	—	6 00	—	—	66 50	4 30	743 30
Westfield, .	24,357 01	—	2,000 00	—	2,811 08	330 50	—	1,695 13	41,746 22
W. Springfield, .	12,492 57	550 50	—	36 25	1,984 10	—	10,552 50	401 61	15,835 53
Wilbraham, .	2,500 00	147 75	—	25 00	211 15	40 00	—	209 10	3,133 00
Totals, .	\$310,708 50	\$3,755 14	\$11,068 70	\$485 25	\$37,074 31	\$2,399 33	\$91,288 58	\$40,276 12	\$514,638 10

## FRANKLIN COUNTY — CONCLUDED.

[illegible]



# SCHOOL RETURNS.

xxxiii

Warwick, .	-	500 00	20 20	-	-	-	-	-	275 00	76 33
Wendell, .	-	540 00	32 40	-	-	-	-	-	275 00	-
Whately, .	-	-	-	-	-	-	-	-	359 56	-
Totals,	-	\$69,011 39	\$8,945 37	\$1,209 62	7	599	\$34,991 12	3	\$7,318 77	\$286 83

## HAMPDEN COUNTY — CONCLUDED.

Agawam, .	-	-	-	-	-	-	-	-	\$184 56	-
Blandford, .	-	\$3,500 00	\$210 00	\$103 86	-	-	-	-	342 64	-
Brimfield, .	-	-	-	-	1	72	-	-	331 36	-
Chester, .	-	-	-	-	-	-	-	-	200 00	-
Chicopee, .	-	-	-	-	-	-	-	-	-	\$127 67
Granville, .	-	-	-	-	-	-	-	-	-	-
Hampden, .	-	-	-	-	-	-	-	-	359 56	-
Holland, .	-	222 22	13 33	19 91	-	-	-	-	359 56	-
Holyoke, .	-	-	-	29 94	-	-	-	-	275 00	-
Longmeadow, .	-	-	-	1,650 51	-	-	-	-	-	-
Ludlow, .	\$646 00	-	-	234 70	-	-	-	-	-	-
Monson, .	-	-	-	76 29	-	-	-	-	184 56	-
Montgomery, .	-	48,592 00	2,783 10	364 84	1	82	\$1,758 00	-	312 73	-
Palmer, .	-	-	-	54 43	-	-	-	-	167 64	-
Russell, .	-	850 00	34 34	460 42	-	-	-	-	342 64	-
Southwick, .	-	-	-	-	-	-	-	-	134 56	25 00
Springfield, .	-	15,618 03	752 27	87 35	-	-	-	-	331 36	-
Tolland, .	-	-	-	-	-	-	-	-	256 36	-
Wales, .	-	-	-	60 42	-	-	-	-	-	-
Westfield, .	30 00	125,000 00	6,046 12	64 88	-	-	-	-	275 00	-
W. Springfield, .	-	13,979 69	728 88	218 49	-	-	-	-	331 36	-
Wilbraham, .	-	1,308 40	78 50	-	-	-	-	-	-	-
Totals,	\$676 00	\$209,070 34	\$10,646 54	\$3,426 04	4	499	\$12,674 82	30	\$4,673 45	\$178 42

\* United with high school.

## HAMPSHIRE COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 16 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Amherst, .	4,512	\$3,310,865	19	644	413	756	4	339	413	635	595	.94	23
Belchertown, .	2,120	829,490	18	410	266	425	9	41	266	346	305	.88	19
Chesterfield, .	608	296,959	7	101	73	112	1	13	73	94	85	.90	15
Cummington, .	787	304,510	5	120	95	141	2	23	87	113	105	.93	5
Easthampton, .	4,395	2,387,903	22	801	581	740	2	68	518	716	677	.94	26
Enfield, .	952	632,980	9	168	110	217	2	18	120	177	164	.92	9
Goshen, .	297	138,076	3	51	38	59	2	6	38	45	40	.88	3
Granby, .	765	423,588	8	108	66	130	1	20	69	128	112	.87	8
Greenwich, .	526	274,972	3	77	44	82	2	7	44	71	66	.93	3
Hadley, .	1,669	958,934	13	305	219	322	5	5	231	322	276	.85	13
Hatfield, .	1,246	936,070	8	237	138	239	3	2	137	202	175	.86	8
Huntington, .	1,385	503,725	10	238	145	287	-	20	147	224	195	.87	10
Middlefield, .	455	214,380	6	75	42	119	4	7	63	92	79	.85	6
Northampton, .	14,990	9,469,459	62	2,496	1,474	2,513	15	182	1,538	2,126	1,945	.91	73
Pelham, .	486	168,042	3	86	64	91	2	7	64	72	62	.86	4
Plainfield, .	435	161,383	5	73	38	89	1	18	40	69	62	.89	5
Prescott, .	376	166,995	3	51	34	60	1	8	34	47	42	.89	3
Southampton, .	1,017	488,347	8	190	143	205	2	23	131	155	134	.86	8
South Hadley, .	4,261	1,820,369	18	696	516	932	-	51	501	649	605	.93	21
Ware, .	7,329	3,771,820	26	1,526	960	1,237	8	102	682	941	894	.95	30
Westhampton, .	477	237,088	4	87	65	82	1	1	61	55	47	.85	4

## SCHOOL RETURNS.

XXXV

Williamsburg, .	2,057	911,213	15	347	170	431	2	33	230	346	305	.88	16
Worthington, .	714	298,770	6	103	62	123	-	14	72	95	83	.87	6
Totals, .	51,859	\$28,705,938	281	8,990	5,756	9,382	69	1,008	5,559	7,720	7,053	.90	318



## SCHOOL RETURNS.

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Williamsburg, .	2	22	8	6	54 00	29 00	122-15	8-4	-	-	-	-	-	-	-	-	-
Worthington, .	2	7	2	1	24 00	23 44	47-10	7-17	-	-	-	-	-	-	-	-	-
Totals, .	36	387	82	40	\$73 53	\$32 09	2,390	7-17	7	10	26	673	-	81	-	\$10,036 23	23

## HAMPSHIRE COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, care of fires and school-rooms, for the school-year 1891-92.	Expense of supervision by school committee.	Salary of Superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Amherst, .	\$7,485 04	\$100 00	\$500 00	\$15 00	\$780 00	\$300 00	—	\$1,000 00	\$357 59	\$10,537 63
Belchertown, .	4,100 83	251 75	—	15 00	399 60	30 00	—	100 00	37 99	4,935 17
Chesterfield, .	900 00	50 00	—	7 00	30 74	25 00	—	—	64 37	1,077 11
Cummington, .	200 00	42 00	—	6 00	139 83	97 00	—	—	9 56	494 39
Easthampton, .	12,000 00	300 00	765 41	20 00	1,157 50	338 10	—	300 00	1,011 67	15,892 68
Enfield, .	2,200 00	154 35	—	12 00	200 00	100 00	—	178 61	80 41	2,925 37
Goshen, .	350 00	15 00	—	5 00	85 77	—	—	—	5 00	460 77
Granby, .	1,600 40	92 00	—	5 00	149 29	199 60	—	—	57 05	2,103 34
Greenwich, .	460 42	35 00	—	—	154 53	393 82	—	—	—	1,043 77
Hadley, .	3,000 00	119 47	—	12 00	341 69	—	—	—	146 54	3,619 70
Hatfield, .	2,000 00	52 00	160 00	9 00	254 58	—	—	200 00	50 00	2,725 58
Huntington, .	2,000 00	139 84	—	14 50	243 42	26 80	—	—	205 21	2,629 77
Middlefield, .	800 00	25 00	96 00	5 00	75 69	15 00	—	—	—	1,016 69
Northampton, .	33,647 06	—	1,800 00	103 00	2,796 39	204 00	\$6,999 01	—	2,488 70	48,038 16
Pelham, .	788 85	—	50 00	—	136 23	—	—	—	56 00	1,031 08
Plainfield, .	450 00	25 50	—	6 80	65 48	—	—	—	8 69	556 47
Prescott, .	300 00	—	44 50	3 00	33 73	92 50	—	—	1 25	474 98
Southampton, .	1,450 00	—	222 54	—	209 63	—	—	—	78 94	1,961 11
South Hadley, .	9,350 00	175 00	—	10 50	865 64	—	1,109 19	—	767 80	12,278 13
Ware, .	13,000 00	575 00	—	—	2,181 67	112 00	—	2,200 00	687 42	18,756 09
Westhampton, .	895 60	44 00	31 09	—	75 90	166 50	—	—	27 08	1,240 17



## SCHOOL RETURNS.

xxxix

Williamsburg, .	3,000 00	170 00	312 00	16 00	310 00	-	75 00	236 00	4,119 00
Worthington, .	1,000 00	80 00	-	7 10	125 37	129 00	379 00	50 00	1,770 47
Totals, .	\$100,978 20	\$2,445 91	\$3,981 54	\$271 90	\$10,812 68	\$2,229 32	\$4,432 61	\$6,427 27	\$139,687 63

BOARD OF EDUCATION.

## HAMPSHIRE COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.							Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.			
Amherst, .	1	\$6,000 00	\$240 00	-	1	-	-	9	134	\$6,454 00	\$284 56	-	-
Belchertown, .	1	500 00	20 00	\$60 08	1	-	-	1	-	-	331 36	-	-
Chesterfield, .	1	-	-	91 00	1	-	-	1	-	-	331 36	-	-
Cumington, .	1	-	-	328 95	1	150	\$7,628 50	-	-	-	117 64	-	-
Easthampton, .	1	350,000 00	18,500 00	-	1	-	-	-	-	-	312 73	-	-
Enfield, .	1	-	-	-	1	-	-	1	-	-	275 00	-	-
Goshen, .	1	-	-	108 30	1	-	-	1	-	-	359 56	-	-
Granby, .	1	-	-	-	1	-	-	1	-	-	275 00	-	-
Greenwich, .	1	500 00	30 00	-	1	65	1,445 00	1	5	70 00	156 36	-	-
Hadley, .	1	40,000 00	3,000 00	-	1	57	278 00	1	-	-	284 56	-	-
Hatfield, .	1	55,000 00	3,270 00	127 62	1	-	-	-	-	-	267 64	-	-
Huntington, .	1	-	-	162 70	1	-	-	-	-	-	359 56	-	-
Middlefield, .	1	-	-	6 00	1	-	-	4	260	10,000 00	-	-	-
Northampton, .	1	3,000 00	121 20	971 57	1	-	-	-	-	-	275 00	-	-
Pelham, .	1	-	-	84 90	1	-	-	-	-	-	331 36	-	-
Plainfield, .	1	-	-	45 75	1	-	-	-	-	-	342 64	-	-
Prescott, .	1	-	-	-	1	-	-	-	-	-	359 56	-	-
Southampton, .	1	2,500 00	150 00	137 28	1	-	-	-	-	-	184 56	-	-
South Hadley, .	1	-	-	278 11	1	300	60,000 00	1	-	-	-	-	-
Ware, .	1	-	-	-	1	-	-	2	468	1,400 00	-	-	-
Westhampton, .	1	-	-	36 60	1	-	-	-	-	-	359 56	-	-
													10 00

## SCHOOL RETURNS.

xli

Williamsburg, .	-	27,000 00	1,476 00	178 00	-	-	-	-	-	284 56	-
Worthington, .	-	1,961 67	78 27	196 40	-	-	-	-	-	331 36	-
Totals, .	-	\$486,461 67	\$26,885 47	\$2,813 26	5	572	\$69,351 50	16	867	\$17,924 00	\$65 00

## MIDDLESEX COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The per cent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Acton, .	1,897	\$1,451,610	10	254	228	291	1	49	220	251	238	.94	10
Arlington, .	5,629	5,662,736	21	987	672	983	—	137	564	857	776	.90	27
Ashby, .	825	510,927	9	132	88	150	1	28	87	131	124	.94	10
Ashland, .	2,532	1,241,818	11	422	256	458	1	36	268	382	368	.96	12
Ayer, .	2,148	1,319,373	11	391	250	522	12	65	270	410	377	.92	11
Bedford, .	1,092	892,100	4	146	88	162	—	16	88	129	121	.94	7
Belmont, .	2,098	3,508,600	9	385	201	422	2	31	184	364	337	.92	11
Billerica, .	2,380	1,755,594	11	421	262	423	—	4	262	331	302	.91	12
Boxborough, .	325	240,319	4	54	42	65	2	6	42	58	56	.96	4
Burlington, .	617	495,973	5	116	67	111	2	13	62	93	85	.91	5
Cambridge, .	70,028	70,581,670	253	12,160	7,463	12,468	283	1,152	6,238	10,520	9,659	.91	272
Carlisle, .	481	379,512	5	85	58	88	1	6	58	73	66	.90	5
Chelmsford, .	2,695	1,813,550	15	440	309	495	6	26	276	434	387	.89	15
Concord, .	4,427	3,579,034	15	634	347	794	—	127	386	650	583	.89	21
Dracut, .	1,996	1,603,992	12	335	263	374	4	6	222	289	250	.86	12
Dunstable, .	416	293,708	3	55	33	69	—	10	41	48	40	.83	3
Everett, .	11,068	8,780,850	41	2,173	1,381	2,812	—	211	2,008	1,953	1,793	.91	49
Framingham, .	9,239	7,935,100	43	1,657	1,235	2,119	4	183	1,219	1,679	1,573	.93	45
Groton, .	2,057	2,894,136	13	310	236	342	10	43	236	295	288	.97	14
Holliston, .	2,619	1,552,703	15	517	243	510	12	64	286	406	374	.92	16
Hopkinton, .	4,088	2,410,372	20	681	428	766	13	69	422	640	597	.93	22
Hudson, .	4,670	2,626,148	16	812	456	961	11	98	489	796	740	.92	20
Lexington, .	3,197	3,479,158	11	450	270	569	—	52	262	443	415	.93	13

## SCHOOL RETURNS.

xliii

Lincoln, . . . . .	987	2,517,477	6	160	100	185	-	25	100	147	127	.86	7
Littleton, . . . . .	1,625	781,990	7	178	122	248	2	34	122	172	160	.93	8
Lowell, . . . . .	77,696	63,981,245	45	12,749	7,613	11,297	-	988	6,786	8,092	7,340	.90	210
Malden, . . . . .	23,031	18,727,280	84	3,874	2,219	4,137	-	431	2,121	3,358	3,153	.93	102
Marlborough, . . . . .	13,805	7,195,672	43	2,272	1,617	2,559	13	170	1,310	2,114	1,930	.91	60
Maynard, . . . . .	2,700	2,001,098	9	522	355	560	-	28	349	454	425	.93	12
Medford, . . . . .	11,079	10,509,265	41	1,904	1,146	2,428	-	413	1,447	1,898	1,773	.93	51
Melrose, . . . . .	8,519	7,747,715	35	1,621	1,109	1,779	-	178	1,014	1,617	1,561	.90	44
Natick, . . . . .	9,118	5,573,850	40	1,643	1,115	1,959	13	229	1,045	1,698	1,592	.93	46
Newton, . . . . .	24,379	37,488,160	93	4,436	3,007	4,487	1	642	2,630	3,901	3,592	.92	115
North Reading, . . . . .	874	536,048	6	147	91	168	1	11	113	140	113	.80	6
Pepperell, . . . . .	3,127	1,888,437	4	500	379	617	3	56	379	479	428	.89	14
Reading, . . . . .	4,088	2,984,449	16	629	378	767	2	76	422	637	586	.92	19
Sherborn, . . . . .	1,381	828,360	8	152	93	173	6	3	115	128	116	.91	9
Shirley, . . . . .	1,191	695,530	6	237	114	250	-	15	143	155	140	.90	7
Somerville, . . . . .	40,152	36,843,400	142	6,800	4,249	8,510	37	805	4,480	6,502	6,091	.93	178
Stoncham, . . . . .	6,155	3,631,592	23	954	572	1,058	9	106	545	891	841	.94	25
Stow, . . . . .	903	820,988	6	148	98	190	-	34	104	144	133	.92	6
Sudbury, . . . . .	1,197	1,079,480	8	197	139	201	-	4	153	177	159	.89	8
Tewksbury, . . . . .	2,515	1,400,083	10	320	194	404	2	34	216	285	254	.89	11
Townsend, . . . . .	1,750	1,127,123	11	203	139	323	17	45	161	309	292	.94	11
Tyngsborough, . . . . .	662	372,697	7	84	47	106	6	11	51	86	79	.92	7
Wakefield, . . . . .	6,982	4,723,785	24	1,223	770	1,470	-	151	778	1,196	1,066	.89	34
Waltham, . . . . .	18,707	16,397,630	54	2,644	1,614	2,397	1	148	1,284	2,060	1,914	.93	70
Watertown, . . . . .	7,073	7,468,684	21	1,254	634	1,031	2	136	521	848	795	.93	28
Wayland, . . . . .	2,060	1,593,345	12	392	269	420	2	26	269	337	306	.91	12
Westford, . . . . .	2,250	1,117,564	15	353	221	417	3	6	293	311	276	.89	15
Weston, . . . . .	1,664	2,512,733	8	223	146	242	8	23	146	210	195	.92	11
Wilmington, . . . . .	1,213	734,591	7	218	112	229	3	11	128	166	157	.95	7
Winchester, . . . . .	4,861	5,038,504	22	924	611	1,040	4	155	567	792	870	.91	27
Woburn, . . . . .	13,499	9,130,384	47	2,902	1,574	2,561	-	365	1,290	2,124	1,891	.89	56
Totals, . . . . .	431,167	\$382,461,162	1,417	73,480	45,723	78,137	498	7,794	43,302	62,660	57,904	.92	1,832

## MIDDLESEX COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	Av'ge wages per month of male teachers in Public Schools.	Av'ge wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.						
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length.	Salary of Principal.	
																Months.
Acton, .	1	12	5	2	\$102 23	\$40 00	90	9	-	1	1	1	56	Taxation,	9	\$920 00
Arlington, .	4	23	13	8	139 00	56 00	210	10	-	1	1	1	75	Taxation,	10	1,800 00
Ashby, .	1	12	3	3	60 00	30 00	49-15	5-10	1	-	-	-	-	-	-	-
Ashland, .	2	14	5	4	96 75	37 48	94-15	8-12	-	1	1	2	53	Taxation,	10	967 50
Ayer, .	1	15	11	9	120 00	41 00	104-10	9-10	-	1	1	1	61	Taxation,	10	1,200 00
Bedford, .	-	6	1	-	-	44 80	39	9-15	-	1	1	1	10	Taxation,	10	600 00
Belmont, .	1	10	4	4	150 00	44 00	90	10	-	1	1	2	50	Taxation,	10	1,500 00
BillERICA, .	1	13	1	1	110 58	38 61	107	9-15	-	1	1	2	54	Not by tax,	9-15	1,050 00
Boxborough, .	-	4	2	2	-	31 72	32	8	-	-	-	-	-	-	-	-
Burlington, .	1	5	-	1	60 00	32 00	39-10	7-18	-	1	1	1	27	Taxation,	3-10	-
Cambridge, .	21	251	183	161	182 50	62 00	2530	10	-	2	26	783	Taxation,	{ 10 10	3,000 00 3,000 00	
Carlisle, .	-	10	-	-	-	30 00	39-10	7-18	-	-	-	-	-	-	-	-
Chelmsford, .	1	23	2	9	84 00	37 57	134-15	8-19	-	2	{ 1 1	68	Taxation,	{ 9 9	756 00 756 00	
Concord, .	3	20	5	5	190 00	59 87	146	9-12	-	1	5	137	Taxation,	10	1,800 00	
Dracut, .	1	14	4	4	40 00	36 36	88	7-6	2	-	-	-	-	-	-	-
Dunstable, .	1	6	1	1	32 00	30 52	24-15	8-5	-	1	3	106	Taxation,	10	1,300 00	
Everett, .	8	47	22	18	94 28	45 13	403-5	9-16	-	1	4	160	Taxation,	10	1,700 00	
Frammingham, .	2	43	25	21	135 00	40 00	379	9-10	-	1	2	40	Taxation,	10	1,100 00	
Groton, .	1	17	5	3	110 00	38 00	105-9	8	-	1	2	54	Taxation,	9-10	1,900 00	
Holliston, .	1	20	6	2	100 00	46 00	117-10	8-8	-	1	3	81	Taxation,	10	930 00	
Hopkinton, .	1	27	4	3	93 00	40 84	168	8-4	-	1	1	3	87	Taxation,	- 9	1,350 00
Hudson, .	2	19	8	7	125 00	40 39	140-15	8-15	-	1	3	72	Taxation,	10	1,500 00	
Lexington, .	1	12	8	4	150 00	53 33	110	10	-	1	3	72	Taxation,	10	1,500 00	



# SCHOOL RETURNS.

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Lincoln, . . . . .	2	9	-	-	82 05	42 60	52-10	8-18	1	1	2	26	Taxation, 9-15	800 00
Littleton, . . . . .	2	9	1	1	75 00	40 00	61-10	8-15	-	1	2	59	Taxation, 9	675 00
Lowell, . . . . .	14	196	40	43	176 92	62 58	426-2	9-14	-	1	16	644	Taxation, 9-12	2,500 00
Malden, . . . . .	8	94	37	28	156 39	54 06	798	9-10	-	1	8	314	Taxation, 9-10	2,400 00
Marlborough, . . . . .	3	62	12	7	122 00	41 00	385	9	-	1	5	236	Taxation, 9	1,400 00
Maynard, . . . . .	1	13	7	-	112 80	40 00	87-15	9-15	-	1	2	35	Taxation, 9-15	1,100 00
Medford, . . . . .	8	48	19	13	128 81	50 53	394-18	9-12	-	1	9	263	Taxation, 9-18	2,200 00
Melrose, . . . . .	5	39	21	16	91 28	56 25	350	10	-	1	7	194	Taxation, 10	2,000 00
Natick, . . . . .	3	43	35	20	126 66	37 50	363	9-2	-	1	4	156	Taxation, 10	1,600 00
Newton, . . . . .	17	98	54	45	191 76	65 38	930	10	-	1	14	510	Taxation, 10	3,000 00
North Reading, . . . . .	2	8	6	5	56 00	29 60	53-6	8-13	-	1	1	27	Taxation, 9	504 00
Pepperell, . . . . .	1	21	9	7	100 00	37 28	131-10	9-18	1	1	1	46	Taxation, 10	1,000 00
Reading, . . . . .	2	23	12	12	162 16	42 47	151-16	9-9	-	1	4	85	Taxation, 9-6	1,500 00
Sherborn, . . . . .	-	11	-	-	-	34 81	64-15	8-2	1	*	2	40	Part tax, 9-5	900 00
Shirley, . . . . .	-	13	12	10	-	38 75	50	8-6	-	-	-	-	-	-
Somerville, . . . . .	12	166	61	-	162 66	60 00	1340	10	-	1	12	706	Taxation, 10	2,400 00
Stoneham, . . . . .	1	26	5	5	170 00	44 00	214-11	8-11	-	1	3	76	Taxation, 9-6	1,700 00
Stow, . . . . .	1	7	3	2	88 88	35 00	54	9	-	1	1	38	Part tax, 9	800 00
Sudbury, . . . . .	-	13	9	9	-	39 00	64	8	-	-	-	-	-	-
Tewksbury, . . . . .	2	15	5	5	70 00	36 00	90	9	-	1	2	32	Taxation, 10	700 00
Townsend, . . . . .	1	12	3	2	70 00	33 25	85-12	7-14	-	1	1	45	Taxation, 10	700 00
Tyngsborough, . . . . .	-	7	4	3	-	36 11	48	6-15	-	1	1	12	Part tax, 9-10	500 00
Wakefield, . . . . .	37	-	-	-	127 50	51 16	233-1	9-18	-	1	5	111	Taxation, 10	1,800 00
Waltham, . . . . .	9	68	34	31	151 56	58 23	508-18	9-12	-	1	7	212	Taxation, 10	2,000 00
Watertown, . . . . .	9	25	7	4	155 21	18 20	187	9	1	1	4	88	Taxation, 9-15	2,000 00
Wayland, . . . . .	4	16	8	8	80 00	38 00	105	8-15	-	-	-	-	-	-
Westford, . . . . .	-	24	7	4	-	32 00	129-15	8-13	-	-	-	-	-	-
Weston, . . . . .	1	11	3	1	133 00	52 43	72	9	-	1	2	42	Taxation, 9	1,200 00
Wilmington, . . . . .	3	7	3	2	57 39	34 11	70	10	-	1	1	16	Taxation, 10	600 00
Winchester, . . . . .	2	27	16	15	171 25	32 50	220	10	-	1	5	122	Taxation, 10	1,925 00
Woburn, . . . . .	5	51	6	5	94 00	51 64	470	10	-	1	6	189	Taxation, 10	1,800 00
Totals, . . . . .	175	1,822	757	574	\$140 39	\$51 31	13,435-8	8-19	7	47	194	6,298	449-7	\$65,733 50

\* United with Sawin Academy.

## MIDDLESEX COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, and school-rooms, for the school-year 1891-92.	Expense of supervision by school committee.	Salary of superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Acton, . . .	\$4,400 00	—	\$125 00	\$20 00	\$450 00	—	—	\$351 67	\$242 10	\$5,388 77
Arlington, . . .	20,045 33	\$275 00	—	—	1,267 33	—	—	834 70	325 78	22,748 14
Ashby, . . .	1,700 00	—	125 00	—	302 08	—	—	—	81 43	2,208 51
Ashland, . . .	5,556 65	65 00	500 00	—	691 28	—	—	—	316 29	7,129 22
Ayer, . . .	5,200 00	—	30 00	39 00	425 14	—	—	1,170 50	346 59	7,481 23
Bedford, . . .	2,600 00	—	215 74	—	250 00	\$370 50	\$12,589 05	—	—	16,025 29
Belmont, . . .	7,324 54	—	750 00	30 00	572 68	—	18,000 00	500 00	491 73	27,668 95
Billerica, . . .	5,650 00	185 00	519 00	—	593 04	82 50	8,850 00	23 00	59 01	15,961 55
Boxborough, . . .	800 00	—	50 00	12 50	161 37	—	—	—	—	1,023 87
Burlington, . . .	1,200 00	17 00	146 00	12 00	77 00	—	—	—	29 56	1,481 56
Cambridge, . . .	223,615 46	1,969 17	3,000 00	164 75	12,921 28	37 50	118,145 27	5,700 00	6,065 10	371,581 03
Carlisle, . . .	1,000 00	5 00	137 44	—	172 76	—	—	—	92 09	1,444 79
Chelmsford, . . .	5,700 00	60 00	200 00	—	821 91	—	—	—	347 99	7,129 93
Concord, . . .	13,424 85	—	500 00	—	935 45	1,655 00	—	2,437 50	387 26	19,340 06
Dracut, . . .	3,000 00	—	345 33	27 50	286 38	207 00	—	255 27	24 52	4,146 00
Dunstable, . . .	600 00	27 00	—	8 55	62 84	220 00	—	—	5 15	923 54
Everett, . . .	29,048 27	250 00	1,335 00	18 00	4,841 45	—	23,500 00	859 48	985 35	60,837 55
Framingham, . . .	25,250 00	—	1,300 00	100 00	2,800 00	650 00	15,000 00	—	1,500 00	46,600 00
Groton, . . .	6,000 00	200 00	—	26 00	484 86	—	—	200 00	824 06	7,734 92
Holliston, . . .	6,800 00	107 00	480 90	40 15	677 30	140 40	—	554 00	68 00	8,867 75
Hopkinton, . . .	8,000 00	—	750 00	—	1,950 14	195 00	—	—	186 28	11,081 42
Hudson, . . .	9,600 00	—	300 00	48 50	1,020 13	341 50	—	—	677 15	11,987 28
Lexington, . . .	9,819 16	350 00	300 00	—	855 98	600 00	61,000 00	200 00	888 29	74,013 43

## SCHOOL RETURNS.

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Lincoln, . . .	2,800 00	75 00	246 53	-	328 54	22 90	-	816 80	257 74	4,547 51
Littletton, . .	3,239 76	-	119 58	20 00	377 85	315 00	-	-	63 16	4,135 35
Lovell, . . .	193,868 35	1,350 00	2,600 00	635 85	18,094 77	-	67,614 91	9,500 00	15,064 05	308,727 93
Malden, . . .	66,313 07	200 00	2,100 00	52 00	7,090 67	-	26,596 66	-	3,511 71	105,864 11
Marlborough, .	30,749 00	-	2,500 00	-	3,397 84	545 75	-	1,474 25	1,207 78	39,874 62
Maynard, . . .	5,948 45	245 00	-	-	1,084 48	7 84	3,000 00	-	121 79	10,407 56
Medford, . . .	39,770 83	400 00	1,000 00	37 00	5,351 61	420 00	-	1,044 35	2,464 32	50,488 11
Medrose, . . .	24,812 95	-	2,000 00	-	5,022 99	-	20,011 31	1,000 00	1,366 76	53,214 01
Natick, . . .	24,148 98	-	800 00	40 00	2,943 31	-	-	1,000 00	931 76	29,864 05
Newton, . . .	111,390 72	300 00	2,337 50	136 53	9,731 01	-	-	6,350 29	610 97	130,857 02
North Reading, .	2,275 00	-	208 34	61 68	228 93	-	-	-	284 65	3,058 60
Pepperell, . .	7,000 00	-	325 00	46 00	1,200 00	20 00	-	-	-	8,591 00
Reading, . . .	11,000 00	400 00	-	35 00	982 71	-	-	501 63	344 00	13,263 34
Sherborn, . . .	2,725 00	146 50	-	27 00	245 94	48 00	-	-	174 72	3,367 16
Shirley, . . .	2,467 64	150 00	-	15 00	150 14	138 50	-	-	125 83	3,047 11
Somerville, . .	126,646 46	1,495 00	2,500 00	30 36	14,863 09	-	87,631 22	6,129 83	11,826 18	251,122 14
Stoneham, . .	14,500 00	450 00	-	8 00	987 89	-	-	-	284 81	16,230 70
Stow, . . .	1,700 00	-	100 00	23 00	116 77	-	-	-	58 80	1,998 57
Sudbury, . . .	2,777 29	210 25	300 00	50 00	504 36	-	4,800 00	102 38	20 00	8,764 28
Tewksbury, . .	4,545 92	150 00	378 72	25 00	474 01	-	-	300 00	200 00	6,073 65
Townsend, . .	3,500 00	-	150 00	15 00	339 32	352 50	-	55 00	60 91	4,472 73
Tyngsborough, .	1,200 00	-	202 15	15 00	129 65	60 00	2,248 45	-	55 17	3,910 42
Wakefield, . .	19,202 24	450 00	-	-	1,300 84	-	38,460 99	3,180 15	1,536 71	64,130 93
Waltham, . . .	515,111 83	-	500 00	-	4,440 89	259 00	8,000 00	500 00	2,000 00	72,641 47
Watertown, . .	20,345 55	300 00	2,300 00	29 75	1,907 71	457 05	-	-	1,670 39	25,180 70
Wayland, . . .	5,700 00	155 00	-	20 00	400 00	54 00	-	-	175 00	6,504 00
Westford, . . .	4,650 00	8 00	150 00	45 00	227 65	-	-	371 48	122 94	5,575 07
Weston, . . .	7,200 00	150 00	-	-	400 00	-	-	-	-	7,750 00
Wilmington, . .	2,725 00	105 00	279 60	-	274 69	-	-	-	149 92	3,534 21
Winchester, . .	17,350 00	-	1,000 00	20 00	2,095 00	235 00	-	-	1,300 00	22,000 00
Woburn, . . .	35,224 00	-	2,000 00	90 00	3,026 58	125 00	21,500 00	-	1,050 00	63,015 58
Totals, . . .	\$1,247,222 30	\$10,249 92	\$35,476 83	\$2,024 12	\$120,339 67	\$7,559 94	\$536,947 86	\$44,412 28	\$60,983 80	\$2,065,216 72

## MIDDLESEX COUNTY — CONCLUDED.

[illegible]

## SCHOOL RETURNS.

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Lincoln, .	1,209 21	63 34	-	-	-	-	-	-	-	-	-	156 36	-
Littleton, .	3,500 00	210 00	139 76	1	115	8,000 00	13	3,912	-	20,000 00	-	284 56	-
Lowell, .	-	-	-	-	-	-	3	677	-	-	-	-	-
Malden, .	-	-	-	-	-	-	1	325	-	900 00	-	-	124 25
Marlborough, .	\$153 04	-	-	-	-	-	-	-	-	-	-	184 56	84 56
Maynard, .	30 00	-	-	-	-	-	-	-	-	-	-	-	-
Medford, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Melrose, .	-	-	-	-	-	-	-	-	-	1,250 00	-	-	-
Melrose, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Natick, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Newton, .	-	-	-	-	-	-	1	13	-	600 00	-	-	-
North Reading, .	-	-	2,781 18	3	343	23,500 00	8	160	-	11,917 00	-	-	-
Pepperell, .	-	-	-	-	-	-	-	-	-	-	-	284 56	-
Reading, .	-	-	-	-	-	-	-	-	-	-	-	184 56	-
Sherborn, .	-	-	-	-	-	-	-	-	-	-	-	117 64	-
Shirley, .	19,914 97	1,328 74	112 20	1	40	-	-	-	-	-	-	284 56	-
Sonerville, .	11,140 57	265 70	132 49	-	-	-	-	-	-	-	-	267 64	45 00
Stoneham, .	-	-	-	-	-	-	1	693	-	-	-	-	-
Stow, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Sudbury, .	15,735 00	918 00	135 09	-	-	-	-	-	-	-	-	267 64	-
Tewksbury, .	-	-	130 93	-	-	-	-	-	-	-	-	167 64	-
Townsend, .	3,000 00	150 00	-	-	-	-	-	-	-	-	-	184 56	-
Tyngsborough, .	-	-	-	-	-	-	-	-	-	-	-	184 56	45 00
Wakefield, .	2,407 47	120 58	-	-	-	-	-	-	-	-	-	359 56	-
Waltham, .	-	-	-	-	-	-	3	20	-	400 00	-	-	-
Watertown, .	-	-	-	1	61	3,100 00	21	620	-	-	-	-	-
Wayland, .	-	-	-	-	-	-	1	475	-	5,700 00	-	-	-
Westford, .	200 00	12 00	119 50	-	-	-	-	-	-	-	-	184 56	-
Weston, .	48,824 06	2,492 89	84 72	1	67	1,058 00	-	-	-	-	-	212 73	-
Wilmington, .	-	-	-	-	-	-	-	-	-	-	-	162 73	-
Winchester, .	-	-	138 20	-	-	-	-	-	-	-	-	284 56	-
Woburn, .	-	-	-	-	-	-	1	20	-	400 00	-	-	-
Woburn, .	12,000 00	600 00	-	1	200	-	1	450	-	-	-	-	-
Totals, .	\$185,291 28	\$10,580 98	\$7,422 24	12	1,105	\$87,888 00	80	9,848	\$94,745 00	\$7,098 13	\$362 81		

## NANTUCKET COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation — 1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Nantucket,	3,268	\$3,002,227	12	565	460	400	—	40	340	370	320	.87	13

## NORFOLK COUNTY.

TOWNS.	Population—U. S. Census, 1890.	Valuation — 1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Public Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attendance based upon the average membership.	No. of teachers required by the Public Schools.
Avon,	1,384	\$676,425	5	263	171	254	—	3	187	232	200	.86	8
Bellingham,	1,334	677,900	9	206	150	265	2	6	155	201	185	.92	9
Braintree,	4,848	3,908,050	21	785	462	894	—	81	482	697	643	.92	22
Brookline,	12,103	50,729,500	47	2,077	1,202	2,380	180	241	1,202	1,897	1,745	.92	75
Canton,	4,638	3,832,876	15	806	448	520	3	36	276	400	379	.94	18
Cohasset,	2,448	3,897,913	11	338	232	415	—	32	217	365	330	.90	14
Dedham,	7,123	5,914,948	35	1,108	804	1,372	5	118	811	1,153	1,060	.92	40
Dover,	727	657,622	5	104	74	144	1	16	81	94	82	.87	5
Foxborough,	2,933	1,514,847	13	467	286	526	4	43	250	429	389	.90	15
Franklin,	4,831	2,551,350	21	1,011	577	895	—	69	545	743	673	.90	23
Hollbrook,	2,474	1,135,040	12	456	270	506	2	46	305	461	416	.90	13
Hyde Park,	10,193	7,725,590	35	1,920	1,293	1,819	6	299	1,056	1,352	1,221	.90	46
Medfield,	1,493	1,238,909	6	211	127	237	—	25	139	196	181	.92	6
Medway,	2,985	1,189,685	14	454	279	571	2	61	300	435	445	.97	16
Millis,	786	585,400	5	132	94	156	—	3	88	124	109	.87	5
Milton,	4,278	14,141,922	17	710	641	811	1	70	459	633	590	.93	24
Needham,	3,035	2,461,164	15	483	292	632	7	75	399	517	466	.90	19



## SCHOOL RETURNS.

li

Norfolk, .	.	913	506,741	6	162	101	178	2	15	113	164	140	.85	6
Norwood, .	.	3,733	2,600,652	16	653	471	714	-	74	409	621	587	.94	18
Quincy, .	.	16,723	14,427,030	70	4,045	2,368	3,649	4	198	1,964	2,865	2,733	.95	77
Randolph, .	.	3,916	2,022,680	15	580	324	697	8	86	324	624	575	.92	17
Sharon, .	.	1,634	1,231,591	7	230	143	292	-	15	163	217	195	.90	7
Stoughton, .	.	4,852	2,409,890	16	951	534	691	10	57	317	557	494	.88	18
Walpole, .	.	2,604	1,961,890	13	385	236	503	-	47	294	411	358	.87	14
Wellesley, .	.	3,600	6,153,200	12	509	302	564	4	78	307	473	412	.87	19
Weymouth, .	.	10,866	6,534,740	47	1,777	1,175	2,161	-	116	1,131	1,831	1,666	.91	53
Wrentham, .	.	2,566	1,382,979	15	460	282	537	1	38	308	472	429	.91	15
Totals, . .	.	118,950	\$142,070,534	503	21,343	13,338	22,383	242	1,948	12,282	18,164	16,703	.92	602

NANTUCKET COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	Av'g wages per month of male teachers in Public Schools.	Av'g wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.						Salary of Principal.
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Months.		
														Length.	Days.	
Nantucket, .	3	13	3	3	\$100 00	\$32 50	116	9-8	-	1	2	52	Taxation,	10	\$1,000 00	

NORFOLK COUNTY — CONTINUED.

Avon, . . .	1	7	5	5	\$88 88	\$37 60	45	9	-	-	-	-	-	-	-
Bellingham, . . .	1	13	6	3	40 00	35 80	73-5	8-12	-	-	-	-	-	-	-
Brantree, . . .	4	22	7	7	93 33	44 34	188-5	9-13	-	1	2	76	Taxation,	10	\$1,200 00
Brookline, . . .	7	68	20	20	149 26	64 51	440	9-1	-	1	6	134	Taxation,	9-1	3,000 00
Canton, . . .	2	16	3	3	115 00	44 00	150	10	-	1	2	42	Taxation,	10	1,500 00
Cohasset, . . .	3	12	5	5	141 00	39 84	110	10	-	1	3	69	Taxation,	10	1,200 00
Dedham, . . .	6	44	18	15	125 00	48 09	345-5	9-15	-	1	4	120	Taxation,	9-16	1,800 00
Dover, . . .	-	10	6	6	-	37 00	44	8-16	-	1	1	18	Taxation,	9	360 00
Foxborough, . . .	1	14	3	1	138 88	38 28	113-5	8-7	-	1	2	57	Taxation,	9	1,250 00
Franklin, . . .	2	27	3	3	110 00	38 57	189	9	-	1	2	50	Taxation,	9-8	1,005 00
Holbrook, . . .	1	16	4	4	106 00	39 50	120	10	-	1	2	86	Taxation,	10	1,060 00
Hyde Park, . . .	7	39	9	12	113 12	47 77	348-14	10	-	1	6	232	Taxation,	10	1,900 00
Medfield, . . .	1	6	3	3	100 60	42 10	51-10	9-10	-	1	1	42	Taxation,	9 10	950 00
Medway, . . .	1	17	5	3	100 00	34 26	126	9	-	1	2	66	Taxation,	10	1,000 00
Millis, . . .	1	4	4	4	50 00	34 00	36-5	7-5	-	1	-	11	Taxation,	10	-
Milton, . . .	6	25	17	17	132 80	56 60	162-8	9-10	-	1	3	60	Taxation,	9-10	1,840 00
Needham, . . .	4	18	5	3	98 00	44 33	143	9-4	-	1	2	79	Taxation,	10	1,200 00

## SCHOOL RETURNS.

iii

	-	11	2	2	37	8-5	-	-	-	-	-	-	-	-	-	-	-
					32	49-10											
Norfolk,	.	23	19	16	\$120 00	129	-	-	-	9-12	-	2	63	Taxation,	10	-	1,200 00
Norwood,	.	71	33	28	\$126 66	665	-	-	-	9-15	-	4	122	Taxation,	9-15	-	1,800 00
Quincy,	.	14	5	-	\$119 30	41 40	-	-	-	9-10	-	3	85	Taxation,	9-10	-	1,400 00
Randolph,	.	10	4	3	-	40 00	-	-	-	10	-	1	32	Taxation,	10	-	600 00
Sharon,	.	21	6	4	\$139 00	42 00	-	-	-	9-5	-	2	72	Taxation,	9-5	-	1,450 00
Stoughton,	.	16	9	8	\$101 53	46 92	-	-	-	9-15	-	2	77	Taxation,	9-17	-	1,000 00
Walpole,	.	24	13	9	\$115 00	49 40	-	-	-	9-7	-	3	88	Taxation,	10	-	1,900 00
Wellesley,	.	45	8	7	\$93 00	40 00	-	-	-	9-16	-	7	207	Taxation,	10	-	{ 1,200 00 }
Weymouth,,	.	16	4	2	70 00	36 50	-	-	-	9-4	-	{ 1 }  { 1 }	62	Taxation,	9-10	-	{ 760 00 }  { 760 00 }
Wrentham,,	.	609	226	193	\$108 58	\$45 95	-	-	-	-	-	1	1,950	-	233-2	-	\$32,555 00
Totals,. . .	. . .	77			\$47,46-17	9-6	1	26	64	1	1,950	-	-	-	-	-	-

## NANTUCKET COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes Schools, including board, fuel, care of rooms, for the school- year 1891-2.	Expense of supervision by school committee.	Salary of superin- tendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries,— books, stationery, etc.	Amount expended for transportation of pu- bils.	Amount expended for new school-houses.	Amount expended for alterations and perma- nent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by tax- ation.
Nantucket,	\$5,383 44	\$100 00	—	\$12 00	\$443 52	—	—	—	\$122 17	\$6,061 13

## NORFOLK COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes Schools, including board, fuel, care of rooms, for the school- year 1891-2.	Expense of supervision by school committee.	Salary of superin- tendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries,— books, stationery, etc.	Amount expended for transportation of pu- bils.	Amount expended for new school-houses.	Amount expended for alterations and perma- nent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by tax- ation.
Avon,	\$2,952 22	\$37 25	—	\$15 00	\$40 68	—	—	\$1,075 00	\$30 52	\$4,150 67
Bellingham,	2,000 00	25 00	\$85 00	10 00	198 21	—	—	—	—	2,318 21
Braintree,	10,400 00	—	1,316 00	—	1,226 52	\$214 54	\$21,872 84	—	1,277 20	36,307 10
Brookline,	74,600 00	450 00	3,500 00	30 00	4,247 29	—	—	23,000 00	1,501 00	107,328 29
Canton,	11,090 00	25 00	960 00	50 00	500 00	175 00	—	—	1,140 00	13,940 00
Cohasset,	7,503 24	—	650 00	25 00	1,011 44	554 76	32,000 00	—	737 80	42,482 24
Dedham,	29,165 97	103 75	1,900 00	—	4,578 98	—	3,540 00	1,621 72	969 93	41,880 35
Dover,	2,360 00	—	70 00	20 00	185 00	—	—	500 00	25 00	3,160 00
Foxborough,	6,250 00	275 00	—	39 00	700 00	—	—	—	250 00	7,514 00
Franklin,	10,215 09	272 00	500 00	—	1,124 04	—	24,415 37	3,768 14	697 66	40,992 30
Holbrook,	6,600 00	255 00	—	—	700 00	—	12,500 00	—	200 00	20,255 00
Hyde Park,	30,165 55	750 00	—	35 00	2,764 90	—	—	3,299 00	3,950 19	40,964 64
Medfield,	3,700 00	115 00	—	5 00	500 00	—	—	—	204 17	4,524 17
Medway,	5,500 00	181 50	132 81	20 00	810 51	330 60	—	—	—	6,975 42
Millis,	1,812 20	10 00	113 76	16 50	200 77	188 50	—	75 00	24 00	2,440 73
Milton,	19,683 10	—	1,500 00	17 00	3,227 63	723 85	—	—	765 74	25,917 32
Needham,	10,300 00	255 00	—	20 00	725 90	—	—	432 83	517 49	12,251 22

## SCHOOL RETURNS.

lv

Norfolk, .	1,800 00	102 25	-	-	167 41	-	-	175 70	301 08	2,546 44
Norwood, .	10,645 31	-	800 00	25 00	965 44	-	7,674 19	2,030 89	2,409 49	24,550 32
Quincy, .	54,125 00	-	2,000 00	18 00	7,500 00	1,271 00	50,000 00	-	2,000 00	116,914 00
Randolph, .	8,430 62	325 00	-	-	511 04	-	-	100 00	-	9,366 66
Sharon, .	3,000 00	25 00	300 00	-	314 00	-	-	-	241 00	3,880 00
Stoughton, .	9,782 19	463 75	400 00	50 00	2,090 20	-	4,524 31	3,464 22	309 63	21,084 30
Walpole, .	8,000 00	-	500 00	6 50	689 70	661 61	-	-	238 57	10,096 38
Wellesley, .	12,440 98	225 00	-	-	1,149 96	312 20	-	4,164 68	6 63	18,899 21
Weymouth, .	30,497 64	693 11	1,755 00	21 93	2,522 26	1,036 17	-	1,000 00	2,703 34	40,229 45
Wrentham, .	7,200 00	476 18	-	10 80	478 21	198 27	-	1,300 00	734 34	10,397 80
Totals, .	\$380,219 11	\$5,064 79	\$16,482 57	\$134 73	\$39,130 09	\$5,666 50	\$156,526 71	\$46,007 18	\$21,834 54	\$871,366 22

## NANTUCKET COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Nantucket.	1	1	-	\$154 20	1	70	\$500 00	1	15	\$150 00	\$50 00	\$75 00

NORFOLK COUNTY — CONCLUDED.

[illegible]



## SCHOOL RETURNS.

lvii

Norfolk, .	-	-	-	-	-	-	-	-	-	-	-	267 64	-
Norwood, .	-	-	-	-	-	-	-	-	-	-	-	117 64	-
Quincy, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Randolph, .	-	-	-	-	-	-	-	-	-	-	-	134 56	-
Sharon, .	-	-	-	-	-	-	-	-	-	-	-	156 36	-
Stoughton, .	-	-	-	-	-	-	-	-	-	-	-	117 64	-
Walpole, .	-	-	-	-	-	-	-	-	-	-	-	167 64	-
Wellesley, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Weymouth, .	-	-	-	-	-	-	-	-	-	-	-	-	70 00
Wrentham, .	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals, .	\$600 00	\$91,088 46	\$4,154 97	\$5,371 34	4	406	\$20,227 14	22	1,663	\$19,670 00	\$3,285 94	\$90 21	

## PLYMOUTH COUNTY.

TOWNS.	Population—U. S. Cen- sus, 1890.	Valuation — 1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Pub- lic Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attend- ance based upon the average membership.	No. of teachers required by the Public Schools.
Abington, . . . . .	4,260	\$2,209,723	15	682	393	816	—	122	424	675	617	.91	24
Bridgewater, . . . . .	4,249	2,363,676	17	468	289	610	—	54	366	482	430	.89	19
Brockton, . . . . .	27,294	18,472,692	100	4,641	2,681	4,976	—	546	3,008	4,139	3,779	.91	103
Carver, . . . . .	994	668,665	9	146	89	213	4	28	118	167	140	.83	9
Duxbury, . . . . .	1,908	1,245,846	10	304	201	354	1	44	213	279	246	.88	11
East Bridgewater, . . . . .	2,911	1,482,134	14	445	258	543	8	53	276	416	383	.92	15
Halifax, . . . . .	562	267,578	4	97	60	100	—	5	60	83	73	.88	4
Hanover, . . . . .	2,093	1,205,481	9	342	232	335	—	14	236	296	264	.89	10
Hanson, . . . . .	1,267	604,673	8	168	113	195	3	8	115	166	143	.86	8
Hingham, . . . . .	4,364	3,781,399	15	597	362	718	16	78	391	619	553	.89	21
Hull, . . . . .	989	2,491,177	4	89	57	123	2	13	76	90	79	.87	4
Kingston, . . . . .	1,659	1,510,265	7	253	153	279	—	24	151	251	232	.92	9
Lakeville, . . . . .	935	475,255	7	100	69	145	2	10	72	95	81	.85	7
Marion, . . . . .	871	907,650	7	153	131	134	—	3	121	108	102	.94	7
Marshfield, . . . . .	1,713	1,175,799	10	213	180	252	—	30	140	229	215	.94	10
Mattapoisett, . . . . .	1,148	1,530,361	7	153	97	168	—	18	97	155	118	.76	8
Middleborough, . . . . .	6,065	3,628,175	23	853	544	1,027	9	120	578	786	720	.91	28
Norwell, . . . . .	1,635	885,726	10	237	132	254	1	25	141	202	177	.87	10
Pembroke, . . . . .	1,320	648,025	8	199	102	205	3	5	115	161	136	.84	8
Plymouth, . . . . .	7,314	5,906,225	34	1,360	869	1,497	—	132	869	1,292	1,152	.89	40
Rochester, . . . . .	597	304,882	5	80	80	84	1	5	79	80	60	.75	5
Rockland, . . . . .	5,213	478,143	6	145	129	150	—	5	119	122	99	.81	6
		2,724,963	21	846	509	1,084	—	124	575	922	850	.92	24

Seituate, . . .	2,318	1,936,880	12	439	293	415	4	38	275	357	320	.89	15
Wareham, . . .	3,451	1,744,883	18	499	341	554	3	32	336	449	400	.89	19
West Bridgewater, . .	1,917	1,065,174	10	281	188	313	4	11	204	225	203	.90	10
Whitman, . . .	4,441	3,262,250	16	789	484	920	1	95	474	755	695	.92	18
Totals, . . .	92,700	\$62,978,703	406	14,579	8,986	16,464	62	1,642	9,629	13,601	12,267	.90	452

## SUFFOLK COUNTY.

Boston, . . .	448,477	\$855,069,415	574	73,032	45,563	68,963	1,333	6,443	35,452	60,976	54,062	.89	1,420
Chelsea, . . .	27,909	21,219,712	81	4,626	2,673	4,993	-	605	2,750	3,880	3,499	.90	99
Revere, . . .	5,668	5,585,216	24	1,115	628	1,132	-	54	811	850	800	.94	26
Winthrop, . . .	2,726	3,775,885	11	437	312	527	2	36	261	468	396	.84	12
Totals, . . .	484,780	\$885,650,228	690	79,210	49,176	75,615	1,335	7,138	39,274	66,174	58,757	.88	1,557

## PLYMOUTH COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	A'v'ge wages per month of male teachers in Public Schools.	A'v'ge wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	A'v'ge No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.					Salary of Principal.
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length. Months.	
Abington, .	—	24	11	9	—	\$40 21	145-11	9-14	—	1	3	99	Taxation,	9-14	\$1,000 00
Bridgewater, .	4	26	23	22	\$93 70	39 05	160	9-7	1	1	3	59	Taxation,	9-10	1,200 00
Brookton, .	13	110	55	44	122 09	48 00	1,010	10	—	1	10	372	Taxation,	10	2,000 00
Carver, .	2	11	3	1	35 00	29 55	69-15	7-15	—	—	—	—	—	—	—
Duxbury, .	3	12	3	2	70 00	33 00	97-15	9-16	—	1	2	60	Part tax,	10	900 00
East Bridgewater, .	1	21	9	9	100 00	38 28	127	9-1	—	1	2	62	Taxation,	10	1,000 00
Halifax, .	—	4	3	—	—	32 00	35	8-15	—	—	—	—	—	—	—
Hanover, .	1	12	5	3	80 00	33 77	86-15	9-12	—	1	2	55	Taxation,	10	800 00
Hanson, .	—	11	2	2	—	32 50	69-15	8-14	—	—	—	—	—	—	—
Hingham, .	8	21	14	11	86 66	42 14	145-10	9-14	—	1	4	106	Taxation,	9-14	1,600 00
Hull, .	1	4	1	—	60 00	42 66	38-13	9-13	—	—	—	—	—	—	—
Kingston, .	1	13	7	4	100 00	40 00	65-15	9-17	—	1	2	56	Taxation,	10	1,000 00
Lakeville, .	1	10	4	3	24 00	29 42	50-10	8	1	—	—	10	—	—	—
Marion, .	—	11	1	—	—	36 28	63	9	—	—	—	—	—	—	—
Marshfield, .	2	18	7	7	66 67	33 72	90	9	—	1	1	33	Taxation,	9	600 00
Mattapoisett, .	2	13	2	1	54 50	35 63	57	8-2	1	1	1	27	Part tax,	9	750 00
Middleborough, .	2	33	10	8	112 22	36 68	209-10	9-2	—	1	3	103	Taxation,	10	1,230 00
Norwell, .	2	13	8	5	84 20	30 44	97-10	9-15	—	1	1	47	Taxation,	9-15	800 00
Pembroke, .	—	12	6	6	—	30 00	70-15	8-16	—	—	—	—	—	—	—
Plymouth, .	5	39	8	8	97 50	39 69	325	9-17	—	1	6	163	Taxation,	10	1,500 00
Plympton, .	—	9	5	5	—	32 00	37-5	7-9	1	—	—	—	—	—	—
Rochester, .	—	9	3	3	—	34 00	53-2	8-17	—	—	—	—	—	—	—
Rockland, .	6	18	8	7	63 33	41 11	194	9-5	—	1	3	132	Taxation,	10	1,300 00

## SCHOOL RETURNS.

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Scituate, . . .	1	18	7	6	115 79	39 00	109	9-1	-	1	2	57	Taxation, Taxation, Not by tax, Taxation,	9-10 9-10 8 10	1,100 00 1,050 00 - 1,300 00
Wareham, . . .	4	19	2	1	80 26	31 40	145-10	8-1	-	1	2	46			
W. Bridgewater, Whitman, . . .	- 2	16 19	6 8	4 4	- 95 00	38 99 44 00	84-15 146	8-9 9-10	- -	1 1	- 3	26 129			
Totals, . . .	61	526	221	175	\$88 98	\$39 18	3,784-6	9	4	18	50	1,642	-	173-13	\$19,130 00

## SUFFOLK COUNTY—CONTINUED.

Boston, . . .	173	1,247	950	950	\$254 26	\$72 95	5,740	10	-	11	130	3,654	Taxation, Taxation, Taxation, Taxation,	10 10 - 9-15	\$26,460 00 6,336 00 2,880 00 2,200 00 - 1,000 00
Chelsea, . . .	8	91	17	16	153 75	49 69	810	10	-	1	11	352			
Revere, . . .	2	24	9	8	62 50	44 41	212	9	-	1	-	44			
Winthrop, . . .	2	10	10	8	89 75	43 80	104	9-15	-	1	1	32			
Totals, . . .	185	1,372	986	982	\$246 06	\$70 69	6,866	9-13	-	14	142	4,082	-	29-15	\$38,876 00

PLYMOUTH COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, fires and school-rooms, for the school-year 1891-92.	Expense of supervision by school committee.	Salary of Superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Abington.	\$11,176 94	—	\$312 50	—	\$1,010 58	\$396 00	\$11,222 64	—	\$988 71	\$25,107 37
Bridgewater.	9,370 52	\$10 00	500 00	—	564 66	321 00	—	—	423 23	11,189 41
Brockton.	66,444 60	300 00	2,200 00	\$73 25	7,684 96	110 00	16,997 94	\$14,756 80	11,653 92	120,221 47
Carver.	1,650 00	70 00	—	27 00	260 95	—	—	—	113 27	2,121 22
Duxbury.	3,000 00	310 36	—	25 00	384 29	—	—	—	235 90	3,955 55
E. Bridgewater.	6,250 00	412 35	—	—	495 83	—	—	—	102 97	7,261 15
Halifax.	1,000 00	—	50 00	10 00	47 18	—	—	—	—	1,107 18
Hanover.	3,650 00	175 00	—	—	421 44	30 00	—	—	390 92	4,667 36
Hanson.	2,125 00	164 75	—	23 00	255 22	—	—	46 77	203 78	2,818 52
Hingham.	11,346 12	—	1,150 00	—	1,274 10	220 00	—	—	567 93	14,558 15
Hull.	2,377 30	120 00	—	—	476 82	139 00	—	—	177 57	3,290 69
Kingston.	5,550 00	—	250 00	—	600 00	200 00	—	333 34	500 00	7,433 34
Lakeville.	1,500 00	100 00	—	20 00	73 83	154 00	—	—	125 00	1,972 83
Marion.	2,200 00	121 00	—	5 00	269 77	—	—	60 00	48 00	2,703 77
Marshfield.	3,100 00	38 00	375 00	25 00	348 62	190 42	—	—	52 37	4,129 41
Mattapoisett.	2,235 85	94 80	—	—	277 40	32 00	756 57	—	162 43	3,559 05
Middleborough.	11,544 38	150 00	1,135 00	15 00	934 19	1,173 17	—	448 09	560 76	15,960 59
Norwell.	3,200 00	183 68	—	25 00	264 39	22 50	—	550 03	137 21	4,382 81
Pembroke.	1,908 77	129 22	—	13 50	129 09	—	—	—	271 38	2,451 96
Plymouth.	21,006 07	—	1,350 00	110 75	1,761 35	—	40,000 00	—	1,407 35	65,635 52
Plympton.	800 00	—	50 00	—	100 00	—	—	—	69 45	1,019 45
Rochester.	1,600 00	135 00	—	—	200 00	—	—	—	100 00	2,035 00
Rockland.	11,300 00	380 25	—	—	1,330 97	—	5,473 71	438 81	936 09	19,859 83



Scituate, .	5,200 00	70 00	300 00	25 00	252 62	180 00	-	212 00	254 04	6,493 66
Wareham, .	6,500 00	326 25	-	-	-	-	6,149 08	-	385 53	13,360 86
W. Bridgewater,	3,500 00	16 00	140 00	-	150 00	-	-	-	450 00	4,256 00
Whitman, .	10,000 00	483 00	-	-	873 67	-	-	-	1,505 60	12,862 27
Totals, .	\$209,535 55	\$3,789 66	\$7,812 50	\$397 50	\$20,441 93	\$3,168 09	\$80,599 94	\$16,845 84	\$21,823 41	\$364,414 42

## SUFFOLK COUNTY — CONTINUED.

Boston, .	\$1,169,528 12	\$41,638 33	\$4,000 00	\$2,500 00	\$77,662 57	-	\$527,429 10	-	\$205,344 27	\$2,028,102 39
Chelsea, .	70,570 65	300 00	2,400 00	98 20	8,776 19	-	-	\$1,792 50	3,915 59	87,853 13
Revere, .	17,609 81	-	1,500 00	32 25	-	-	-	526 48	312 72	19,981 26
Winthrop, .	6,200 00	225 00	-	23 00	511 06	-	11,334 40	388 78	377 00	19,059 24
Totals, .	\$1,263,908 58	\$42,163 33	\$7,900 00	\$2,653 45	\$86,949 82	-	\$538,763 50	\$2,707 76	\$209,949 58	\$2,154,996 02

## PLYMOUTH COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan., 25, 1892.	How much of said fund was used for apparatus and books of reference.
	No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.						
Abington, . . . . .	-	\$5,300 00	\$352 12	-	\$419 58	1	-	-	-	-	\$106 36	\$26 59
Bridgewater, . . . . .	-	-	-	-	1,119 11	-	-	-	-	-	162 73	-
Brockton, . . . . .	-	-	-	-	110 97	-	-	-	515	\$1,400 00	-	-
Carver, . . . . .	-	7,000 00	260 00	-	110 97	-	-	-	-	-	267 64	-
Duxbury, . . . . .	-	25,000 00	1,200 00	-	273 64	1	60	-	29	2,700 00	100 00	-
E. Bridgewater, . . . . .	-	-	-	-	390 53	-	-	-	-	-	184 56	-
Halifax, . . . . .	-	-	-	-	-	-	-	-	-	-	359 56	-
Hanover, . . . . .	-	1,000 00	40 00	-	207 20	1	77	\$600 00	-	-	167 64	-
Hanson, . . . . .	-	-	-	-	179 42	-	-	-	-	-	267 64	-
Hingham, . . . . .	-	31,000 00	1,850 00	-	296 00	1	50	900 00	-	-	-	-
Hull, . . . . .	-	-	-	-	-	-	-	-	-	-	50 00	-
Kingston, . . . . .	-	-	-	-	261 31	-	-	-	-	-	184 56	-
Lakeville, . . . . .	-	-	-	-	187 64	-	-	-	-	-	359 56	-
Marion, . . . . .	-	-	-	-	100 48	1	51	-	-	-	284 56	-
Marshfield, . . . . .	-	-	-	-	-	-	-	-	-	-	100 00	-
Mattapoisett, . . . . .	-	12,052 00	342 84	-	-	-	-	-	-	-	100 00	-
Middleborough, . . . . .	-	-	-	-	-	-	-	-	45	1,600 00	-	-
Norwell, . . . . .	-	-	-	-	247 67	-	-	-	-	-	284 56	-
Pembroke, . . . . .	-	-	-	-	190 97	-	-	-	-	-	256 36	-
Plymouth, . . . . .	-	365 00	18 25	-	-	-	-	-	12	1,200 00	-	-
Plympton, . . . . .	-	-	-	-	-	-	-	-	-	-	342 64	-
Rochester, . . . . .	-	2,000 00	-	-	-	-	-	-	-	-	359 56	-
Rockland, . . . . .	-	-	-	-	134 00	-	-	-	-	-	117 64	-

## SCHOOL RETURNS.

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Scituate, . . .	-	-	194 30	-	-	-	-	-	-	184 56	-
Wareham, . . .	-	-	-	-	-	-	-	-	-	184 56	-
W. Bridgewater,	-	78,700 00	-	1	50	2,916 00	-	-	-	167 64	39 84
Whitman, . . .	-	-	-	-	-	-	-	-	-	-	-
Totals, . . .	-	\$162,417 00	\$8,243 21	\$4,312 82	6	288	\$4,416 00	9	601	\$6,900 00	\$4,592 33
											\$66 43

## SUFFOLK COUNTY — CONCLUDED.

Boston, . . .	-	\$62,434 49	\$3,044 87	\$135,852 81	38	12,000	\$205,000 00	85	3,300	\$360,000 00	-
Chelsea, . . .	-	-	-	-	-	-	-	2	50	1,200 00	-
Revere, . . .	-	-	-	-	-	-	-	-	-	-	-
Winthrop, . . .	-	-	-	394 00	-	-	-	-	-	-	-
Totals, . . .	-	\$62,434 49	\$3,044 87	\$136,246 81	38	12,000	\$205,000 00	87	3,350	\$361,200 00	-

## WORCESTER COUNTY

TOWNS.	Population—U. S. Cen- sus, 1890.	Valuation—1891.	No. of Public Schools.	No. of persons in town 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Pub- lic Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The per cent. of attend- ance based upon the average membership.	No. of teachers required by the Public Schools.
Ashburnham,	2,074	\$1,022,739	13	356	247	439	—	51	241	389	362	.93	13
Athol,	3,131	3,156,212	23	901	539	1,131	2	109	652	848	781	.92	25
Athol,	1,532	505,365	6	277	189	284	1	10	169	204	179	.88	6
Barre,	2,239	1,455,076	12	348	208	347	2	42	208	319	276	.87	13
Berlin,	884	504,572	5	117	65	146	4	22	72	107	97	.90	5
Blackstone,	6,138	2,571,850	22	953	578	1,187	6	45	635	835	740	.89	25
Bolton,	827	484,663	7	130	80	187	2	21	90	126	119	.94	7
Boylston,	770	512,439	4	120	75	129	1	14	70	97	88	.90	4
Brookfield,	3,352	1,294,488	16	471	292	648	4	66	352	492	436	.88	18
Charlton,	1,847	924,990	13	312	186	318	9	14	186	246	208	.84	13
Clinton,	10,424	6,258,940	30	1,977	1,170	1,669	—	101	1,054	1,374	1,254	.91	34
Dana,	700	287,599	4	91	60	100	2	—	60	90	81	.90	4
Douglas,	1,908	1,014,890	13	392	236	420	4	28	236	291	263	.90	13
Dudley,	2,944	1,003,680	13	616	407	472	9	28	233	359	312	.87	15
Fitchburg,	22,037	16,261,117	68	4,051	2,004	3,854	11	351	2,200	2,979	2,756	.92	82
Gardner,	8,424	4,134,970	27	1,500	875	1,617	4	125	863	1,302	1,181	.90	35
Grafton,	5,002	2,351,385	24	936	481	1,054	3	35	712	835	740	.88	29
Hardwick,	2,922	1,403,755	14	502	301	431	4	25	235	308	285	.92	15
Harvard,	1,095	956,875	9	140	93	187	6	18	105	133	119	.89	9
Holden,	2,623	1,077,770	15	492	388	541	11	36	328	423	383	.90	17
Hopedale,	1,176	1,400,435	6	216	117	246	—	37	136	180	170	.94	9
Hubbardston,	1,346	687,817	9	174	163	272	1	19	163	187	173	.92	9
Lancaster,	2,201	2,975,296	10	316	210	312	—	40	175	217	191	.88	13
Leicester,	3,120	2,117,420	15	572	342	668	5	66	432	516	461	.89	18
Leominster,	7,269	4,093,541	28	1,052	714	1,352	6	146	727	1,065	971	.91	33
Lunenburg,	1,146	737,533	8	199	117	214	1	17	114	168	154	.91	8

## SCHOOL RETURNS.

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	919	549,649	8	139	84	181	2	22	96	150	139	.92	8
Mendon, . . .	8,780	4,955,108	33	1,283	856	1,482	1	186	842	1,219	1,129	.92	38
Milford, . . .	4,428	2,103,061	16	954	571	914	-	55	449	741	650	.88	17
Millbury, . . .	573	439,960	6	104	60	113	-	10	69	91	83	.91	6
New Braintree, . . .	1,952	1,274,953	8	309	205	415	3	35	221	290	266	.91	22
Northborough, . . .	4,603	2,348,716	19	798	510	952	-	82	611	748	699	.93	22
Northbridge, . . .	3,871	1,710,555	16	811	389	533	-	58	265	404	364	.90	17
North Brookfield, . . .	738	345,924	5	82	64	146	-	10	94	104	95	.91	7
Oakham, . . .	2,616	1,296,860	12	425	318	440	5	33	309	350	300	.85	12
Oxford, . . .	445	285,949	3	64	67	69	-	8	38	57	49	.86	5
Paxton, . . .	1,050	580,798	8	148	89	166	1	27	74	140	129	.92	8
Petersham, . . .	502	275,050	4	95	56	98	1	4	64	71	65	.91	4
Phillipston, . . .	982	829,164	7	155	130	186	-	39	133	191	177	.93	11
Princeton, . . .	1,030	566,146	9	160	105	185	-	25	105	146	137	.94	9
Royalston, . . .	980	499,784	8	150	99	155	1	28	138	165	150	.90	8
Rutland, . . .	1,449	1,036,239	9	253	167	282	2	37	167	234	216	.92	11
Shrewsbury, . . .	2,114	1,487,484	10	337	208	399	-	43	225	285	259	.90	11
Southborough, . . .	7,655	3,289,963	31	1,640	983	1,583	11	76	680	863	784	.90	33
Southbridge, . . .	8,747	4,152,520	40	1,953	1,176	1,896	7	128	1,231	1,583	1,489	.93	42
Spencer, . . .	1,244	844,565	9	183	106	232	2	34	138	167	157	.93	10
Sterling, . . .	2,074	956,284	14	348	230	451	2	3	264	301	275	.91	14
Sturbridge, . . .	3,180	1,281,598	16	680	462	609	10	28	428	420	350	.83	16
Sutton, . . .	2,999	1,231,635	16	573	337	584	14	57	300	467	439	.94	17
Templeton, . . .	1,878	926,611	10	257	214	343	4	25	214	276	248	.90	11
Upton, . . .	3,408	2,106,020	18	549	201	655	8	48	347	490	447	.91	18
Uxbridge, . . .	4,681	2,467,347	22	850	530	1,061	10	62	645	782	720	.92	28
Warren, . . .	7,031	2,890,916	14	1,330	757	751	12	33	411	567	501	.88	15
Webster, . . .	5,195	2,775,638	20	785	510	877	3	151	517	693	646	.93	24
Westborough, . . .	3,019	1,207,051	14	526	340	607	3	38	378	467	435	.93	15
West Boylston, . . .	1,592	781,218	9	266	187	271	3	12	165	210	195	.93	9
West Brookfield, . . .	1,688	745,265	12	233	139	312	10	32	176	251	231	.92	12
Westminster, . . .	4,390	2,135,344	18	766	458	851	3	98	499	703	653	.92	23
Winchendon, . . .	84,655	77,618,358	283	15,484	12,637	15,346	-	1,862	8,677	12,285	11,033	.89	349
Totals, . . .	280,787	\$186,091,150	1,141	49,901	33,412	51,373	216	4,855	29,421	40,001	36,290	.90	1,312

## WORCESTER COUNTY — CONTINUED.

TOWNS.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	A'vge wages per month of male teachers in Public Schools.	A'vge wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.					Salary of Principal.	
										No. of High Schools.	No. of teachers.	No. of pupils.	How supported.	Length.		
														Months.		Days.
Ashburnham,	1	16	4	2	\$40 00	\$33 00	96-5	7-5	-	1	3	74	Taxation,	9-10	\$1,000 00	
Athol, .	3	36	13	12	87 50	36 62	188-3	8-3	-	1	2	82	Taxation,	9 10	1,200 00	
Auburn,	-	9	7	5	-	40 25	45	7-10	-	-	-	-	-	-	-	
Barre, .	1	26	11	8	40 00	37 00	96-8	8-6	-	1	2	34	Taxation,	9	900 00	
Berlin,	-	6	3	3	-	32 80	40	8	-	-	-	-	-	-	-	
Blackstone, .	2	31	3	2	91 55	33 50	198	9	-	1	2	60	Taxation,	9	1,000 00	
Bolton,	-	10	3	1	-	31 97	59	8-8	-	1	1	31	Not by tax,	10	500 00	
Boylston,	-	6	2	1	-	39 67	35	8-15	-	-	-	-	-	-	-	
Brookfield, .	1	26	1	-	110 00	36 28	120	8	-	1	2	52	Taxation,	10	1,100 00	
Charlton, .	5	17	5	-	33 60	29 76	97-5	7-5	-	-	-	-	-	-	-	
Clinton,	1	42	13	3	160 00	44 60	282-2	9-13	-	1	3	108	Taxation,	9-12	1,600 00	
Dana, .	-	8	3	2	-	32 75	29	7-5	-	-	-	-	-	-	-	
Douglas,	1	19	5	3	80 00	33 50	113-15	8 15	-	1	1	29	Taxation,	9-15	800 00	
Dudley,	2	15	3	3	100 00	35 00	116	8-18	-	1	3	32	Part tax,	10	1,000 00	
Fitchburg,	8	91	29	25	140 00	48 00	659	9-10	-	1	9	411	Taxation,	9-15	2,100 00	
Gardner, .	3	47	15	13	130 00	41 50	221-15	8-4	1	1	4	108	Taxation,	9-15	1,300 00	
Grafton,	2	38	6	3	133 33	41 75	189-15	8-1	-	1	3	82	Taxation,	9	1,200 00	
Hardwick,	1	24	6	6	66 66	31 32	127-5	9	-	1	2	43	Taxation,	9	600 00	
Harvard,	2	13	3	1	34 00	33 50	76-5	8-10	-	-	-	-	-	-	-	
Holden,	1	25	8	5	100 00	34 13	122-10	7-10	-	1	2	42	Taxation,	9-15	1,000 00	
Hopedale,	-	12	9	8	-	52 43	56	9 6	-	1	2	38	Taxation,	10	760 00	
Hubbardston,	-	16	6	2	-	30 48	70-5	7-8	1	-	-	-	-	-	-	
Leicester, .	1	12	7	6	147 00	41 00	90	9	-	1	3	47	Taxation,	9-10	1,400 00	
Leicester, .	5	19	5	2	98 75	42 40	130	8-15	-	1	4	69	Part tax,	10	1,700 00	
Leominster,	2	31	6	6	125 00	42 40	269	9-6	-	1	5	127	Taxation,	10	1,500 00	
Lunenburg, .	1	12	2	2	32 00	31 51	60-7	7-6	-	-	-	-	-	-	-	



## SCHOOL RETURNS.

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	3	7	2	2	2	39 50	31 71	58-17	7-7	1	1	30	Taxation,	6	375 00
Mendon, . . .	2	40	12	7	150 00	43 86	288-19	8-15	8-15	1	4	140	Taxation,	10	1,500 00
Milford, . . .	8	21	9	4	69 12	38 68	157-4	9-8	9-8	1	2	81	Taxation,	10	1,400 00
Millbury, . . .	7	3	3	3	31 00	36 93	45-10	7-12	7-12	1	1	34	Taxation,	9-5	1,000 00
New Braintree, . . .	2	11	9	8	108 10	41 45	72-10	9-1	9-1	1	2	37	Taxation,	10	1,300 00
Northborough, . . .	1	26	17	17	130 00	33 88	178-5	9-10	9-10	1	2	56	Taxation,	10	1,500 00
Northbridge, . . .	1	23	-	-	150 00	30 00	157-5	9	9	1	2	37	Taxation,	10	1,500 00
North Brookfield, . . .	1	7	-	-	-	30 00	38	7-12	7-12	1	1	40	Taxation,	10	1,000 00
Oakham, . . .	3	14	3	2	84 00	31 97	101-15	8-9	8-9	1	1	23	Taxation,	7-10	375 00
Oxford, . . .	1	4	3	2	44 00	30 75	20-8	6-16	6-16	1	1	50	Taxation,	5	450 00
Paxton, . . .	1	11	1	1	-	30 25	57-10	7-10	7-10	1	1	39	Taxation,	9	720 00
Petersham, . . .	-	6	4	4	-	31 82	26-15	6-14	6-14	1	2	45	Taxation,	9-10	1,000 00
Phillipston, . . .	-	11	5	1	-	32 20	43-5	7	7	1	2	86	Taxation,	10	1,200 00
Princeton, . . .	-	16	8	3	-	31 55	60	6-13	6-13	1	2	113	Taxation,	9-10	1,300 00
Royalston, . . .	-	10	2	2	50 00	28 28	50	6-5	6-5	1	2	33	Taxation,	-	750 00
Rutland, . . .	1	10	2	2	80 00	34 73	77	8-5	8-5	1	2	43	Taxation,	9	873 33
Shrewsbury, . . .	2	20	2	2	80 00	41 67	87-10	8-15	8-15	1	2	90	Taxation,	9-10	800 00
Southborough, . . .	3	17	6	5	78 63	37 38	240-5	7-11	7-11	1	2	61	Taxation,	9-10	750 00
Southbridge, . . .	1	40	20	11	120 00	38 44	361	9-10	9-10	8	1	56	Taxation,	9-10	1,200 00
Spencer, . . .	4	49	9	5	77 55	33 20	93-10	10-8	10-8	1	2	68	Taxation,	9	800 00
Sterling, . . .	2	12	3	1	78 96	33 20	111-10	8	8	1	2	45	Taxation,	10	1,200 00
Sturbridge, . . .	-	18	2	1	-	29 76	121-0	7-10	7-10	1	2	89	Taxation,	9-10	1,400 00
Sutton, . . .	1	27	7	7	30 00	32 95	119-15	7-9	7-9	1	2	26	Taxation,	9-3	1,000 00
Templeton, . . .	3	22	5	4	86 11	34 50	81-5	8-2	8-2	1	2	50	Taxation,	9	450 00
Upton, . . .	1	14	5	5	100 00	36 68	151	8-5	8-5	1	2	101	Not by tax,	9-10	2,200 00
Uxbridge, . . .	1	20	4	3	126 00	37 11	182	8-15	8-15	1	2	1,216	Taxation,	10	3,000 00
Warren, . . .	3	29	5	5	76 50	35 50	116	8	8	2	1	136	-	-	419-17
Webster, . . .	1	21	5	3	120 00	43 00	178	8-18	8-18	2	1	45	-	-	\$49,153 33
Westborough, . . .	5	33	6	5	110 00	43 33	109	7	7	1	2	26	-	-	
West Boylston, . . .	2	22	4	4	122 00	36 00	77	8-11	8-11	1	1	50	-	-	
West Brookfield, . . .	-	13	4	4	-	31 33	89-11	7-11	7-11	1	1	101	-	-	
Westminster, . . .	-	16	1	2	-	37 18	149-16	8-14	8-14	1	6	1,216	-	-	
Winchendon, . . .	4	19	4	3	115 90	55 99	2,830	10	10	1	29	4,121	-	-	
Worcester, . . .	31	318	269	260	136 91	55 99	2,830	10	10	1	29	4,121	-	-	
Totals, . . .	129	1,531	617	504	\$103 41	\$41 67	10,119 15	8-4	8-4	21	45	136	-	-	

## WORCESTER COUNTY — CONTINUED.

TOWNS.	Amount raised by taxes and expended for schools, including wages of teachers, board, fuel, care of rooms, for the school- year 1891-92.	Expense of supervision by school committee.	Salary of superin- tendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pu- pils.	Amount expended for new school-houses.	Amount expended for alterations and perma- nent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by tax- ation.
Ashburnham, .	\$3,999 00	\$105 00	—	\$15 00	\$4,798 64	\$84 50	—	—	\$87 85	\$9,089 99
Athol, .	11,286 87	300 00	—	30 00	983 61	—	—	—	436 11	13,309 21
Auburn, .	1,800 00	60 00	—	5 00	200 00	120 00	\$1,100 00	—	125 00	3,410 00
Barre, .	5,050 40	150 00	\$468 75	—	427 48	48 20	—	58 20	181 60	6,384 63
Berlin, .	1,100 00	149 05	—	20 16	123 89	—	—	—	380 36	1,723 46
Blackstone, .	9,500 00	—	800 00	50 00	831 87	—	—	684 76	564 49	12,431 12
Bolton, .	1,500 00	85 00	—	14 38	299 65	—	—	—	364 19	2,263 22
Boylston, .	1,600 00	67 20	139 00	8 00	227 55	—	—	—	47 46	2,089 21
Brookfield, .	6,133 93	226 50	625 00	30 00	543 39	128 58	—	—	634 54	8,321 94
Charlton, .	3,097 86	173 14	206 25	10 00	364 40	—	—	137 67	85 07	4,074 39
Clinton, .	21,565 99	172 75	1,600 00	24 99	2,906 16	—	—	—	2,153 62	28,423 51
Dana, .	700 00	69 70	—	18 00	138 95	—	—	—	32 75	959 40
Douglas, .	4,400 00	25 00	500 00	—	500 00	61 25	—	331 69	—	5,817 94
Dudley, .	5,180 19	59 00	187 50	40 00	314 29	—	—	3,254 32	353 11	9,388 41
Fitchburg, .	54,025 70	—	2,500 00	50 00	9,574 62	7 70	22,190 37	1,774 24	2,254 64	92,377 27
Gardner, .	14,016 04	325 00	1,050 00	80 20	3,695 64	—	—	2,006 80	1,217 14	22,390 82
Grafton, .	11,265 40	785 60	624 09	20 00	1,518 38	—	—	765 70	780 11	15,759 28
Harvard, .	3,920 00	231 08	—	20 00	291 56	399 68	—	—	156 92	5,022 24
Harvard, .	2,600 00	105 00	120 50	16 50	281 97	—	—	—	33 80	3,268 76
Holden, .	6,505 59	85 00	675 00	25 00	451 33	283 70	10,500 00	—	142 25	18,667 87
Hopedale, .	4,500 99	100 00	—	19 00	461 06	—	—	1,347 41	154 84	6,583 30
Hubbardston, .	2,100 00	125 00	259 00	60 00	428 13	315 33	—	232 00	31 42	3,541 88
Lancaster, .	6,343 86	250 00	—	—	721 00	227 00	—	150 00	180 00	7,871 86
Leicester, .	7,707 30	225 74	675 00	25 00	642 64	—	—	2,000 00	561 81	11,837 49
Leominster, .	18,119 93	—	1,375 00	12 00	4,043 13	521 50	—	2,285 07	3,000 00	29,356 63
Lunenburg, .	2,000 00	84 00	134 00	20 00	191 00	30 00	—	—	146 00	2,605 00

## SCHOOL RETURNS.

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Mendon, .	1,600 00	17 50	60 00	20 00	375 00	-	-	75 00	50 00	2,197 50
Milford, .	16,441 58	25 00	1,454 50	25 00	3,323 75	-	-	400 00	1,913 77	23,583 60
Milbury, .	9,000 00	300 00	455 67	1 50	1,023 74	-	-	-	515 33	11,296 24
New Braintree,	1,605 24	79 75	-	14 00	111 95	-	-	40 21	17 00	1,868 15
Northborough,	3,800 00	90 00	315 84	-	513 64	-	-	-	58 24	4,777 72
Northbridge,	12,288 52	-	550 00	50 00	1,011 95	302 67	300 00	250 00	1,567 17	16,320 31
N. Brookfield,	7,800 00	148 75	1,250 00	40 00	827 83	45 20	-	-	725 30	10,837 08
Oakham, .	750 00	86 50	-	9 00	186 66	99 50	-	-	62 42	1,194 08
Oxford, .	5,000 00	250 00	212 50	20 00	380 13	144 00	-	-	225 36	6,231 99
Paxton, .	423 12	40 00	-	7 50	72 29	218 80	-	236 00	21 65	783 36
Petersham,	2,103 80	78 00	394 87	15 00	266 80	106 05	-	-	254 40	3,454 92
Phillipston,	950 00	55 00	93 73	27 00	112 07	161 50	-	45 00	8 81	1,408 11
Princeton,	2,000 00	98 00	166 14	14 00	383 00	341 50	-	133 80	37 00	3,084 64
Royalston,	1,500 00	-	371 00	24 00	152 42	120 00	-	400 00	113 63	2,414 85
Rutland, .	1,709 96	128 75	-	25 00	144 28	449 05	-	-	70 21	2,927 25
Shrewsbury,	4,000 00	-	80 31	18 00	852 26	124 99	-	-	20 00	5,095 56
Southborough,	5,000 00	150 00	78 65	30 00	1,480 25	-	-	300 00	100 00	7,138 90
Southbridge,	13,619 71	-	1,400 00	26 00	2,019 92	517 00	-	-	400 47	17,466 10
Spencer, .	22,694 96	-	1,100 00	26 25	3,522 54	226 50	-	842 00	1,525 16	30,227 91
Sterling, .	3,511 49	61 00	206 17	-	233 96	195 00	-	-	70 99	4,310 11
Sturbridge,	3,500 00	175 00	500 00	23 00	256 00	195 00	-	-	154 00	4,803 00
Sutton, .	4,800 00	-	-	28 00	450 00	60 00	-	250 00	-	5,588 00
Templeton,	5,000 00	87 00	625 00	46 00	800 00	192 00	-	-	270 00	7,020 00
Upton, .	3,809 75	45 00	444 39	25 00	376 65	168 00	-	111 25	56 60	5,036 64
Uxbridge,	8,000 00	69 65	750 00	79 00	768 72	175 95	-	971 12	96 48	10,910 92
Warren, .	11,391 00	15 00	400 00	-	1,037 29	392 75	-	-	551 79	13,787 83
Webster, .	9,091 76	225 00	-	45 00	954 50	100 00	-	-	146 60	10,562 86
Westborough,	11,000 00	400 00	-	-	1,559 29	223 00	-	-	548 90	13,731 19
West Boylston,	6,000 00	150 00	375 80	-	585 83	-	-	600 00	878 60	8,590 23
West Brookfield,	3,000 00	97 00	80 00	34 00	434 00	-	-	135 00	70 00	3,850 00
Westminster, .	3,050 00	82 25	266 15	15 00	307 12	12 00	-	670 00	147 41	4,549 93
Winchendon, .	5,512 02	249 38	513 00	48 13	901 60	72 67	-	220 27	73 59	7,590 66
Worcester, .	245,020 55	1,200 00	3,500 00	197 79	30,180 04	-	125,333 63	3,279 25	18,082 41	426,793 67
Totals, .	\$644,992 51	\$8,362 29	\$27,573 81	\$1,546 40	\$90,568 82	\$6,675 57	\$159,124 00	\$24,370 37	\$42,888 37	\$1,006,402 14

## WORCESTER COUNTY — CONCLUDED.

TOWNS.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Ashburnham, . . .	-	\$100,670 50	\$6,534 27	-	1	217	\$2,028 00	1	-	-	\$156 36	\$54 00
Athol, . . .	-	-	-	-	-	-	-	-	18	\$150 00	-	-
Auburn, . . .	\$16 00	-	-	-	-	-	-	-	-	-	342 64	-
Barre, . . .	-	-	-	\$298 60	-	-	-	-	-	-	167 64	-
Berlin, . . .	-	2,020 00	121 20	57 68	-	-	-	-	-	-	342 65	-
Blackstone, . . .	-	-	-	-	-	-	-	-	-	-	106 37	-
Bolton, . . .	-	12,000 00	541 44	165 42	-	-	-	-	-	-	342 64	10 00
Boylston, . . .	-	-	-	-	-	-	-	-	-	-	267 64	40 25
Brookfield, . . .	-	-	-	286 63	-	-	-	-	-	-	167 64	-
Charlton, . . .	-	3,000 00	150 00	-	-	-	-	-	-	-	284 56	-
Clinton, . . .	-	-	-	-	-	-	-	2	341	290 00	-	-
Dana, . . .	70 50	-	-	92 08	-	-	-	-	-	-	275 00	-
Douglas, . . .	-	-	56 48	-	-	-	-	1	-	-	184 56	-
Dudley, . . .	-	8,000 00	480 00	168 54	1	60	410 00	-	-	-	184 56	-
Fitchburg, . . .	-	-	-	-	-	-	-	2	800	-	-	-
Gardner, . . .	-	1,000 00	50 00	50 00	-	-	-	1	100	900 00	-	-
Grafton, . . .	-	1,000 00	65 00	-	-	-	-	-	-	-	134 56	-
Hardwick, . . .	-	200 00	12 00	251 78	-	-	-	1	135	-	167 64	-
Harvard, . . .	-	-	-	-	1	19	85 00	-	-	-	312 73	-
Holden, . . .	175 00	3,366 00	202 00	319 06	-	-	-	-	-	-	212 73	-
Hopedale, . . .	-	-	-	-	-	-	-	-	-	-	184 56	-
Hubbardston, . . .	-	1,200 00	72 00	-	-	-	-	-	-	-	256 36	60 00
Leicester, . . .	-	51,000 00	3,060 00	-	1	79	260 00	-	-	-	106 36	-
Leominster, . . .	-	13,000 00	520 00	361 54	1	-	-	-	-	-	184 56	-
Lunenburg, . . .	-	-	-	-	-	-	-	1	1	44 00	200 00	-

## SCHOOL RETURNS.

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Mendon, .	-	-	-	169 96	-	-	-	-	2	250	-	267 64
Milford, .	-	-	-	391 71	-	-	-	-	-	-	350 00	-
Millbury, .	-	-	-	-	-	-	-	-	-	-	-	134 56
New Braintree,	-	-	-	102 99	-	-	-	-	-	-	-	359 56
Northborough, .	-	-	-	-	250 00	-	-	-	-	-	-	167 64
Northbridge, .	-	-	-	392 92	-	-	-	-	-	-	-	162 73
N. Brookfield, .	-	-	-	419 80	-	-	-	-	7	358	-	184 56
Oakham, .	-	-	-	150 38	-	-	-	-	-	-	-	275 00
Oxford, .	-	-	-	-	-	-	-	-	-	-	-	167 64
Paxton, .	-	-	-	-	-	-	-	-	-	-	-	342 64
Petersham, .	-	-	-	166 46	103 75	-	-	-	-	-	-	267 64
Phillipston, .	-	-	-	83 23	-	-	-	-	-	-	-	342 64
Princeton, .	-	-	-	93 57	-	-	-	-	-	-	-	267 64
Royalston, .	-	-	-	194 97	410 15	-	-	-	-	-	-	284 56
Rutland, .	-	-	-	100 00	-	-	-	-	-	-	-	342 64
Shrewsbury, .	-	-	-	-	40 20	-	-	-	-	-	-	184 56
Southborough, .	-	-	-	298 58	-	-	-	-	4	136	5,000 00	184 56
Southbridge, .	-	-	-	-	-	-	-	-	2	865	-	-
Spencer, .	80 00	-	-	-	-	-	-	-	-	-	-	-
Sterling, .	-	-	-	-	-	-	-	-	-	-	-	312 73
Sturbridge, .	-	-	-	-	-	-	-	-	-	-	-	284 56
Sutton, .	-	-	-	284 55	-	-	-	-	1	150	600 00	184 56
Templeton, .	-	-	-	229 00	-	-	-	-	2	72	-	167 64
Upton, .	-	-	-	-	-	-	-	-	-	-	-	284 56
Uxbridge, .	-	-	-	-	-	-	-	-	-	-	-	117 64
Warren, .	-	-	-	-	-	-	-	-	-	-	-	134 56
Webster, .	-	-	-	486 91	-	-	-	-	2	700	3,500 00	117 64
Westborough, .	-	-	-	-	-	-	-	-	1	29	350 00	117 64
West Boylston, .	-	-	-	-	-	-	-	-	-	-	-	184 56
W. Brookfield, .	-	-	-	-	-	-	-	-	1	8	-	284 56
Westminster, .	-	-	-	-	-	-	-	-	-	-	-	267 64
Winchendon, .	-	-	-	-	7,000 00	-	-	-	1	8	40 00	50 00
Worcester, .	-	-	-	-	61 04	-	-	-	-	-	33,250 00	-
Totals, .	\$341 50	\$462,918 21	\$19,729 53	\$5,616 36	8	249	16,155 00	52	6,471	\$44,474 00	\$11,026 26	\$546 51



## RECAPITULATION.

COUNTIES.	Population—U. S. Cen- sus, 1890.	Valuation — 1891.	No. of Public Schools.	No. of persons in town May 1, 1891, between 5 and 15 years of age.	No. of persons in town May 1, 1891, between 8 and 14 years of age.	No. of different pupils of all ages in the Pub- lic Schools during the school-year.	No. attending within the year under 5 years of age.	No. attending within the year over 15 years of age.	No. attending within the year between 8 and 14 years of age.	Average membership of all the Schools.	Average attendance in all the Public Schools during the school-year.	The percent. of attend- ance based upon the average membership.
Barnstable,	29,172	\$20,279,416	162	4,364	2,939	5,160	27	626	2,924	4,343	3,948	.90
Berkshire,	81,108	44,218,654	359	14,831	9,906	15,669	108	1,068	8,958	11,986	10,794	.90
Bristol, .	186,465	137,065,647	617	34,436	20,298	31,636	86	2,319	18,284	24,473	21,899	.89
Dukes, .	4,369	3,772,691	21	581	339	627	2	44	238	497	419	.84
Essex, .	299,995	228,196,399	996	50,028	30,730	46,961	84	4,094	27,143	40,947	36,973	.90
Franklin,	38,610	20,222,530	261	6,639	4,133	7,425	66	673	4,285	6,138	5,565	.90
Hampden,	135,713	100,326,994	470	24,009	14,594	21,985	117	1,841	12,534	16,140	14,756	.91
Hampshire,	51,859	28,705,938	281	8,990	5,756	9,382	69	1,008	5,559	7,720	7,053	.90
Middlesex,	431,167	382,461,162	1,417	73,480	45,723	78,137	498	7,794	43,302	62,660	57,904	.92
Nantucket,	3,268	3,002,227	12	565	460	400	—	40	340	370	320	.87
Norfolk,	118,950	142,070,534	503	21,343	13,338	22,383	242	1,948	12,282	18,164	16,703	.92
Plymouth,	92,700	62,978,703	406	14,579	8,986	16,464	62	1,642	9,629	13,601	12,267	.90
Suffolk, .	484,780	885,650,228	690	79,210	49,176	75,615	1,335	7,138	39,274	66,174	58,757	.88
Worcester,	280,787	186,091,150	1,141	49,901	33,412	51,373	216	4,855	29,421	40,001	36,290	.90
Totals, .	2,238,943	\$2,245,042,273	7,336	382,956	239,790	383,217	2,912	35,090	214,173	313,214	283,648	.90



## SCHOOL RETURNS.

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## RECAPITULATION — CONTINUED.

COUNTIES.	No. of teachers required by the Public Schools.	Whole No. of different male teachers in school-year.	Whole No. of different female teachers in school-year.	No. of teachers who have attended Normal Schools.	No. of teachers who have graduated from Normal Schools.	Av'ge wages per month of male teachers in Public Schools.	Av'ge wages per month of female teachers in Public Schools.	Aggregate of months all the Public Schools have been kept during the school-year.	Average No. of months the Public Schools have been kept for the entire year.	No. of Schools kept less than six months each.	HIGH SCHOOLS.			Salary of Principal.
											No. of High Schools.	No. of teachers.	No. of pupils.	
Barnstable,	171	52	185	60	45	\$70 77	\$35 54	1,380-10	8-8	1	10	18	521	\$9,894 13
Berkshire,	453	53	535	88	46	65 79	33 59	3,052-16	7-15	4	15	32	988	14,483 50
Bristol, .	784	65	835	179	134	108 30	42 90	5,835-7	8-16	1	11	55	1,729	15,196 75
Dukes, .	23	5	26	7	7	48 93	34 17	171-7	7-19	—	1	1	34	540 00
Essex, .	1,146	91	1,164	514	329	129 17	46 58	9,516-19	9-5	1	28	119	3,579	39,214 13
Franklin,	274	10	367	78	47	82 52	29 21	1,991-10	7-8	7	8	17	480	6,446 00
Hampden,	549	50	601	241	188	119 17	43 02	3,684-9	8-1	4	8	48	1,333	15,508 00
Hampshire,	318	36	387	82	40	73 53	32 09	2,390	7-17	7	10	26	673	10,036 23
Middlesex,	1,832	175	1,822	757	574	140 39	51 31	13,435-8	8-19	7	47	194	6,298	65,733 50
Nantucket,	13	3	13	3	3	100 00	32 50	116	9-8	—	1	2	52	1,000 00
Norfolk, .	602	77	609	226	193	108 58	45 95	4,746-17	9-6	1	26	64	1,950	32,535 00
Plymouth,	452	61	526	221	175	88 98	39 18	3,784-6	9	4	18	50	1,642	19,130 00
Suffolk, .	1,557	185	1,372	986	982	246 06	70 69	6,866	9-13	—	14	142	4,082	38,876 00
Worcester,	1,312	129	1,531	617	504	103 41	41 67	10,119-15	8-4	21	45	136	4,121	49,153 33
Totals,	9,486	992	9,973	4,059	3,267	\$134 22	\$46 52	57,091-4	8-11	57	242	904	27,482	\$317,746 57

## RECAPITULATION — CONTINUED.

COUNTIES.	Amount raised by taxes and expended for schools, including wages of teachers, fuel, care of fires and school-rooms for the school-year 1891-2.	Expense of supervision by school committee.	Salary of superintendent of Public Schools.	Expense of printing reports, etc.	Expense of sundries, — books, stationery, etc.	Amount expended for transportation of pupils.	Amount expended for new school-houses.	Amount expended for alterations and permanent improvements.	Amount expended for ordinary repairs.	Amount paid for all school purposes from money raised by taxation.
Barnstable, . . . . .	\$68,894 63	\$1,214 66	\$5,997 20	\$349 19	\$6,291 52	\$1,835 67	\$1,947 72	\$1,935 22	\$4,727 98	\$93,193 79
Berkshire, . . . . .	171,449 66	3,067 05	7,329 64	494 41	13,124 90	1,296 10	1,991 70	6,520 76	8,177 81	213,452 03
Bristol, . . . . .	429,040 51	3,925 87	11,973 65	844 85	43,517 13	3,029 47	76,331 40	8,493 53	31,059 78	608,222 19
Dukes, . . . . .	7,160 37	294 93	—	74 00	845 14	—	—	608 25	511 33	9,494 02
Essex, . . . . .	668,578 12	8,886 70	15,139 62	2,236 74	51,275 94	2,414 58	262,935 38	47,059 43	47,446 81	1,108,973 32
Franklin, . . . . .	70,878 81	3,171 23	2,472 42	341 05	8,715 26	2,451 50	1,200 00	8,696 03	4,894 23	102,820 53
Hampden, . . . . .	310,708 50	3,755 14	11,068 70	485 25	57,074 31	2,399 33	91,288 58	40,276 12	17,582 17	514,638 10
Hampshire, . . . . .	100,978 20	2,445 91	3,981 54	271 90	10,812 68	2,229 32	8,108 20	4,432 61	6,427 27	139,687 63
Middlesex, . . . . .	1,217,222 30	10,249 92	35,476 83	2,024 12	120,339 67	7,559 94	536,947 86	44,412 28	60,983 80	2,065,216 72
Nantucket, . . . . .	5,383 44	100 00	—	12 00	443 52	—	—	—	122 17	6,061 13
Norfolk, . . . . .	380,219 11	5,064 79	16,482 57	434 73	39,130 09	5,666 50	156,526 71	46,007 18	21,834 54	671,366 22
Plymouth, . . . . .	209,535 55	3,789 66	7,812 50	397 50	20,441 93	3,168 09	80,599 94	16,845 84	21,823 41	364,414 42
Suffolk, . . . . .	1,263,908 58	42,163 33	7,900 00	2,653 45	86,949 82	—	538,763 50	2,707 76	209,949 58	2,154,996 02
Worcester, . . . . .	644,992 51	8,362 29	27,573 81	1,546 40	90,568 82	6,675 57	159,421 00	24,370 37	42,888 37	1,006,402 14
Totals, . . . . .	\$5,578,950 29	\$96,491 48	\$153,208 48	\$12,165 59	\$532,530 73	\$38,726 07	\$1,916,064 99	\$252,371 38	\$478,429 25	\$9,058,938 26

## RECAPITULATION — CONCLUDED.

COUNTIES.	Amount of voluntary contributions for Public Schools.	Amount of local funds, the income of which can be appropriated only for the support of Schools and Academies.	Income of local funds.	Income of surplus revenue and other funds, including the dog tax, used at the option of the town.	ACADEMIES AND PRIVATE SCHOOLS.						Town's share of school fund payable Jan. 25, 1892.	How much of said fund was used for apparatus and books of reference.
					No. of Academies.	Whole No. attending for the year.	Amount of tuition paid.	No. of Private Schools.	Whole No. attending for the year.	Estimated amount of tuition.		
Barnstable, . . . . .	\$100 00	\$39,733 00	\$1,763 29	\$2,512 92	1	—	—	1	6	\$10 00	\$3,516 85	\$157 45
Berkshire, . . . . .	—	12,048 22	741 63	3,040 00	3	—	—	16	1,457	23,960 0	7,680 01	94 00
Bristol, . . . . .	3,071 00	212,000 00	13,610 69	7,356 64	3	323	\$15,671 00	32	6,048	20,956 00	3,440 37	175 77
Dukes, . . . . .	—	—	—	54 02	1	9	—	1	10	100 00	1,437 72	13 75
Essex, . . . . .	—	563,014 40	11,153 87	8,243 54	5	755	34,700 00	49	6,551	29,934 46	3,899 18	107 00
Franklin, . . . . .	—	69,011 39	3,945 37	1,209 62	7	599	34,991 12	3	23	1,035 33	7,318 77	286 83
Hampden, . . . . .	676 00	209,070 34	10,646 54	3,426 04	4	499	12,674 82	30	6,345	59,387 00	4,673 45	178 42
Hampshire, . . . . .	—	486,461 67	26,885 47	2,813 26	5	572	69,351 50	16	867	17,924 00	5,823 93	65 00
Middlesex, . . . . .	207 04	185,291 28	10,580 98	7,422 24	12	1,105	87,888 00	80	9,848	91,745 00	7,098 13	362 81
Nantucket, . . . . .	—	—	—	154 20	1	70	500 00	1	15	150 00	50 00	75 00
Norfolk, . . . . .	600 00	91,088 46	4,154 97	5,371 34	4	406	20,227 14	22	1,663	19,670 00	3,285 94	90 21
Plymouth, . . . . .	—	162,417 00	8,243 21	4,312 82	6	288	4,416 00	9	601	6,900 00	4,592 33	66 43
Suffolk, . . . . .	—	62,434 49	3,044 87	136,246 81	38	12,000	205,000 00	87	3,350	301,200 00	—	—
Worcester, . . . . .	341 50	462,918 21	19,729 53	5,616 36	8	624	18,938 00	52	6,471	44,474 00	11,026 26	546 51
Totals, . . . . .	\$4,995 54	\$2,555,488 46	\$114,500 42	\$187,779 81	94	17,250	\$504,357 58	399	43,355	\$680,445 79	\$63,842 94	\$2,219 18

## EVENING SCHOOLS.

CITIES AND TOWNS.	No. of Schools.	ATTENDANCE.			TIME. No. of Evenings.	No. of Teachers.	Expense.
		Males.	Females.	Average.			
Amesbury, . . . . .	1	140	22	118	26	3	\$340 00
Boston, . . . . .	22	5,933	*	3,976	105	194	39,177 39
Brockton, . . . . .	1	256	74	189	47	8	1,706 40
Brookline, . . . . .	1	123	*	28	84	3	519 05
Cambridge, . . . . .	6	950	*	365	50	46	5,371 42
Chelsea, . . . . .	2	375	*	136	90	15	1,138 00
Chicopee, . . . . .	2	317	228	407	40	27	1,058 50
Clinton, . . . . .	2	221	144	151	60	14	577 00
Cohasset, . . . . .	1	30	-	18	36	3	300 00
Concord, . . . . .	1	63	14	30	23	4	329 67
Everett, . . . . .	1	85	50	60	55	3	340 50
Fall River, . . . . .	45	1,976	907	1,491	81	94	12,688 18
Fitchburg, . . . . .	5	593	*	270	57	34	2,282 00
Framingham, . . . . .	2	90	38	70	40	6	750 00
Haverhill, . . . . .	11	275	*	166	60	11	1,565 42
Holyoke, . . . . .	6	658	520	664	40	60	3,769 00
Hyde Park, . . . . .	3	194	43	-	40	5	707 79
Lawrence, . . . . .	4	680	373	589	54	34	2,339 25
Lowell, . . . . .	11	2,182	1,445	1,777	73	104	15,495 61
Lynn, . . . . .	13	303	232	302	55	22	2,332 37
Malden, . . . . .	2	135	88	142	124	10	1,701 01
Marlborough, . . . . .	1	142	*	51	80	3	572 78
Maynard, . . . . .	2	75	38	38	29	3	217 00
Medford, . . . . .	1	55	10	22	18	5	372 35
Melrose, . . . . .	1	47	82	38	60	3	550 00
Natick, . . . . .	1	21	54	37	35	4	300 00
New Bedford, . . . . .	22	1,380	662	678	58	51	6,465 90
Newburyport, . . . . .	2	51	40	39	30	7	252 00
Newton, . . . . .	2	128	65	84	33	10	804 75
North Adams, . . . . .	9	175	60	174	40	17	1,000 90
Northampton, . . . . .	4	118	87	138	60	14	1,136 83
North Attleborough, . . . . .	1	19	15	27	35	3	191 50
Northbridge, . . . . .	2	48	10	42	30	4	197 00
Norwood, . . . . .	3	129	35	65	60	6	305 89
Pittsfield, . . . . .	2	137	125	112	68	5	945 45
Quincy, . . . . .	1	337	58	169	42	12	1,438 00
Salem, . . . . .	4	455	122	166	21	16	2,306 00
Somerville, . . . . .	4	348	85	161	42	20	1,849 36
Southbridge, . . . . .	6	189	155	296	39	7	601 55
Spencer, . . . . .	1	99	50	66	50	9	440 01
Springfield, . . . . .	5	823	161	338	106	22	3,886 50
Sutton, . . . . .	1	48	18	39	50	2	87 45
Taunton, . . . . .	6	308	202	274	36	19	1,559 25
Waltham, . . . . .	3	208	166	173	145	13	1,690 83
Warren, . . . . .	2	129	82	105	30	8	217 50
Warwick, . . . . .	1	18	13	-	50	1	110 00
Watertown, . . . . .	1	58	27	27	21	4	151 66
Webster, . . . . .	4	130	35	66	40	8	480 15
Westfield, . . . . .	2	91	30	51	36	5	232 00
Westford, . . . . .	1	24	23	27	36	2	148 62
West Springfield, . . . . .	2	46	33	46	48	2	190 39
Weymouth, . . . . .	1	87	40	70	60	4	750 00
Williamsburg, . . . . .	1	21	12	18	56	2	100 00
Woburn, . . . . .	1	72	16	50	50	4	648 20
Worcester, . . . . .	13	745	142	651	83	53	6,869 25
Totals, . . . . .	255	22,340	6,881	15,287	2,922	1,048	\$131,557 63

\* With males.

## SCHOOL RETURNS.

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## RETURNS OF SCHOOLS IN STATE INSTITUTIONS FOR THE YEAR ENDING JULY 31, 1892.

STATE INSTITUTIONS.	No. of Schools in the Institution.	No. of different Schools of all ages during the year.	Average attendance during the year.	No. under 5 years of age attending School.	No. over 15 years of age attending School.	No. between 5 and 15 years of age remaining in the Institution July 31, 1892.	NO. OF TEACHERS DURING THE YEAR.		WAGES OF TEACHERS PER MONTH.		Length of each School in Months.
							Males.	Females.	Males.	Females.	
State Industrial School at Lancaster, .	4	176	157	0	49	33	-	4	-	\$25 60*	12
State Primary School at Monson, .	6	565	250	17	8	162	-	6	-	25 83	11 $\frac{3}{4}$
Lyman School for Boys at Westborough, .	7	344	203	0	182	162	-	13	-	28 50 to 57 00*	10 $\frac{1}{2}$

\* And home.



GRADUATED TABLES—FIRST SERIES.

The following Table shows the sums appropriated by the several cities and towns in the State for the education of each child between five and fifteen years of age. The income of the surplus revenue and of other funds held in a similar way, when appropriated to schools, is added to the sum raised by taxes; and these sums constitute the amount reckoned as appropriations. The income of such school funds as were given and are held on the express condition that their income shall be appropriated to schools is not included. Such an appropriation of their income, being necessary to retaining the funds, is no evidence of the liberality of those holding the trust. But if a town appropriates the income of any fund to its public schools, which may be so appropriated or not, at the option of the voters, or when the town has a legal right to use such income in defraying its ordinary expenses, then such appropriation is as really a contribution to common schools as an equal sum raised by taxes. On this account the surplus revenue and sometimes other funds are to be distinguished from local school funds as generally held. The income of the one *may* be appropriated to schools, or not, at the pleasure of the town; the income of the other *must* be appropriated to schools by the condition of the donation. Funds of the latter kind are usually donations made to furnish means of education in addition to those provided by a reasonable taxation. Committees are expected, in their annual returns, to make this distinction in relation to school funds.

Voluntary contributions are not included in the amount which is divided in order to ascertain the sum appropriated to each child. In many towns such contributions, however liberal, are not permanent, and cannot be relied upon as a stated provision. They are often raised and applied to favor particular schools, or classes of scholars, and not to benefit equally all that attend the public schools. Besides, the value of board and fuel gratuitously furnished is determined by the mere estimate of individuals, and is therefore uncertain; while the amount raised by taxes, being in money, has a fixed and definite value, and is a matter of record. Still the contributions voluntarily made are exhibited in a separate column of the Table, as necessary to a complete statement of the provision made by the towns for the education of their children.

The Table exhibits the rank of each city or town in the State, in respect to its liberality in the appropriation of money to its schools, as compared with other cities and towns for the year 1891-92, also its rank in a similar scale for 1890-91. It presents the sum appropriated to each child between five and fifteen.



## GRADUATED TABLES — (FOR THE STATE) — FIRST SERIES.

Table showing the Comparative Amount of Money appropriated by the different Towns in the State for the Education of each Child in the Town between the Ages of 5 and 15 Years.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
1	1	BROOKLINE,	\$35 88.8	\$74,600 00	-	\$74,600 00	2,077	-
2	2	Nahant,	32 87.1	4,174 71	-	4,174 71	127	-
3	3	Weston,	32 28.6	7,200 00	-	7,200 00	223	-
4	4	Milton,	27 72.2	19,683 10	-	19,683 10	710	-
57	5	Yarmouth,	26 75	3,700 00	\$366 00	4,066 00	152	\$100 00
44	6	Hull,	26 71.1	2,377 30	-	2,377 30	89	-
10	7	Swampscott,	26 11.5	9,114 48	-	9,114 48	349	-
5	8	Newton,	25 73.7	111,390 72	2,781 18	114,171 90	4,436	-
7	9	Dedham,	24 97	29,165 97	-	29,165 97	1,168	-
6	10	Wellesley,	24 44	12,440 98	-	12,440 98	509	-
25	11	Manchester,	23 03.3	4,906 07	-	4,906 07	213	-
34	12	Kingston,	22 96.9	5,550 00	261 31	5,811 31	253	-
9	13	Cohasset,	22 90.6	7,503 24	239 21	7,742 45	338	-
17	14	Dover,	22 69.2	2,360 00	-	2,360 00	104	-
27	15	Lexington,	21 82	9,819 16	-	9,819 16	450	-
13	16	Stockbridge,	21 74.8	6,241 75	-	6,241 75	287	-
23	17	Wellfleet,	21 69.1	3,500 00	79 09	3,579 09	165	-
48	18	Walpole,	21 65.2	8,000 00	336 34	8,336 34	385	-

Showing the Comparative Amount of Money appropriated by the different Towns in the State — Continued.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
14	19	Needham,	\$21 32.5	\$10,300 00	-	\$10,300 00	483	-
22	21	Concord,	13 424 85	13,424 85	-	13,424 85	634	-
21	20	Bridgewater,	21 17.4	9,370 52	\$419 58	9,790 10	468	-
50	22	Barnstable,	20 91.9	12,015 68	403 77	12,419 45	594	-
8	23	Medford,	20 88.8	39,770 83	-	39,770 83	1,904	-
29	24	Waltham,	20 84.4	55,111 83	-	55,111 83	2,614	-
16	25	Hopedale,	20 83.7	4,500 99	-	4,500 99	216	-
20	26	Falmouth,	20 68.4	7,500 00	422 13	7,922 13	383	-
149	27	Bourne,	20 67.1	4,951 00	279 00	5,230 00	253	-
24	28	Sandwich,	20 64.8	4,943 63	259 90	5,203 53	252	-
15	29	Arlington,	20 30.9	20,045 33	-	20,045 33	987	-
26	30	Lancaster,	20 07.5	6,343 86	-	6,343 86	316	-
309	31	Egremont,	19 92.3	1,000 00	36 04	1,036 04	52	-
12	32	Hingham,	19 50.1	11,346 12	296 00	11,642 12	597	-
37	33	Groton,	19 35.4	6,000 00	-	6,000 00	310	-
19	34	Sterling,	19 18.8	3,511 49	-	3,511 49	183	-
30	35	Belmont,	19 02.4	7,324 54	-	7,324 54	385	-
31	36	Littleton,	18 98.6	3,239 76	139 76	3,379 52	178	-
40	37	Winchester,	18 77.7	17,350 00	-	17,350 00	924	-
33	38	Sherborn,	18 66.5	2,725 00	112 20	2,837 20	152	-
41	39	Somerville,	18 62.4	126,646 46	-	126,646 46	6,800	-
28	40	Harvard,	18 57.1	2,600 00	-	2,600 00	140	-
43	41	Springfield,	18 51.8	132,111 07	-	132,111 07	7,134	-
39	42	Cambridge,	18 38.9	223,615 46	-	223,615 46	12,160	-
46	43	Acton,	18 03.4	4,400 00	180 80	4,580 80	254	-
11	44	Boston,	17 87.4	1,169,528 12	135,852 81	1,305,380 93	73,032	-

63	45	Bedford, . . . . .	17 80.8	2,600 00	-	2,600 00	146
184	46	Eastham, . . . . .	17 77	1,100 00	55 05	1,155 05	65
55	47	Weymouth, . . . . .	17 69.5	30,497 64	948 00	31,445 64	1,777
94	48	Raynham, . . . . .	17 54.7	3,000 00	263 84	3,263 84	186
35	49	Medfield, . . . . .	17 53.5	3,700 00	-	3,700 00	211
52	50	Lincoln, . . . . .	17 50	2,800 00	-	2,800 00	160
54	51	Reading, . . . . .	17 48.8	11,000 00	-	11,000 00	629
190	52	Sunderland, . . . . .	17 44.1	1,500 00	-	1,500 00	86
38	53	Great Barrington, . . . . .	17 34.2	11,000 00	844 79	11,844 79	683
104	54	Townsend, . . . . .	17 24.1	3,500 00	-	3,500 00	203
88	55	Leominster, . . . . .	17 22.4	18,119 93	-	18,119 93	1,052
42	56	Malden, . . . . .	17 11.7	66,313 07	-	66,313 07	3,874
85	57	Lakeville, . . . . .	16 87.6	1,500 00	187 64	1,687 64	100
122	58	Montgomery, . . . . .	16 80	500 00	54 43	554 43	33
49	59	Barnardston, . . . . .	16 79.6	2,050 00	66 35	2,116 35	126
61	60	Peabody, . . . . .	16 69.2	30,500 00	714 46	31,214 46	1,870
65	61	New Braintree, . . . . .	16 42.5	1,605 24	102 99	1,708 23	104
56	62	Wrentham, . . . . .	16 40.6	7,200 00	346 87	7,546 87	460
216	63	Abington, . . . . .	16 38.8	11,176 94	-	11,176 94	682
78	64	Andover, . . . . .	16 31.9	16,000 00	140 00	16,140 00	989
32	65	Norwood, . . . . .	16 30.2	10,645 31	-	10,645 31	653
51	66	Watertown, . . . . .	16 22.4	20,345 55	-	20,345 55	1,254
86	67	North Andover, . . . . .	16 20.5	10,890 00	-	10,890 00	672
58	68	Ashfield, . . . . .	16 17.1	1,800 00	92 10	1,892 10	117
92	69	Lynn, . . . . .	16 16.1	134,865 76	-	134,865 76	8,345
102	70	Mansfield, . . . . .	16 13.9	7,827 84	467 73	8,295 57	514
76	71	Framingham, . . . . .	15 97.9	25,250 00	1,227 68	26,477 68	1,657
71	72	Taunton, . . . . .	15 95.7	67,948 87	-	67,948 87	4,258
136	73	Marblehead, . . . . .	15 94.5	16,470 19	383 92	16,854 11	1,057
115	74	Northbridge, . . . . .	15 89.1	12,288 52	392 92	26,814 44	798
82	75	Worcester, . . . . .	15 82.4	245,020 55	-	245,020 55	15,484
72	76	Granby, . . . . .	15 82.1	1,600 40	108 30	1,708 70	108

*Showing the Comparative Amount of Money appropriated by the different Towns in the State — Continued.*

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
74	77	Shrewsbury,	\$15 81	\$4,000 00	—	\$4,000 00	253	—
75	78	Revere,	15 79.3	17,609 81	—	17,609 81	1,115	—
47	79	Southborough,	15 72.2	5,000 00	\$298 58	5,298 58	337	—
83	80	Hyde Park,	15 71.1	30,165 55	—	30,165 55	1,920	—
59	81	Wakefield,	15 70	19,202 24	—	19,202 24	1,223	—
112	82	North Attleborough,	15 69.5	17,450 00	792 33	18,442 33	1,175	—
80	83	Shelburne,	15 63.5	3,000 00	80 12	3,080 12	197	—
53	84	Gloucester,	15 50.2	55,893 97	1,450 05	57,344 02	3,699	—
68	85	Salem,	15 50.1	81,311 10	2,381 13	83,692 23	5,399	—
81	86	North Reading,	15 47.6	2,275 00	—	2,275 00	147	—
128	87	Harwich,	15 44.5	5,500 00	168 59	5,668 59	367	—
114	88	Plymouth,	15 44.5	21,006 07	—	21,006 07	1,360	—
204	89	Easthampton	15 39.1	12,000 00	328 95	12,328 95	801	—
120	90	Barre,	15 37	5,050 40	298 60	5,349 00	348	—
18	91	Randolph,	15 35.4	8,430 62	474 78	8,905 40	580	—
106	92	Petersham,	15 33.9	2,103 80	166 46	2,270 26	148	—
117	93	Swansea,	15 33.7	3,130 15	228 69	3,358 84	219	—
77	94	Melrose,	15 30.7	24,812 95	—	24,812 95	1,621	—
79	95	Chelsea,	15 25.5	70,570 65	—	70,570 65	4,626	—
62	96	Fairhaven,	15 23	6,500 00	368 84	6,868 84	451	—
95	97	Lowell,	15 20.6	193,868 35	—	193,868 35	12,749	—
64	98	Stoneham,	15 19.9	14,500 00	—	14,500 00	954	—
66	99	Winthrop,	15 08.9	6,200 00	394 00	6,594 00	437	—
91	100	Marion,	15 03.5	2,200 00	100 48	2,300 48	153	—
174	101	Lee,	14 98.4	9,740 00	—	9,740 00	650	—
108	102	East Bridgewater,	14 92.2	6,250 00	390 53	6,640 53	445	—

## SCHOOL RETURNS.

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127	Wayland,	14 84.5	5,700 00	119 50	5,819 50	392	-
60	Upton,	14 82.3	3,809 75	-	3,809 75	257	-
70	Boxborough,	14 81.4	800 00	-	800 00	54	-
132	Sudbury,	14 76.2	2,777 29	130 93	2,908 22	197	-
111	Natick,	14 69.8	24,148 98	-	24,148 98	1,643	-
170	Dalton,	14 66.9	6,865 39	-	6,865 39	468	-
67	Westfield,	14 66.4	24,357 01	-	24,357 01	1,661	\$30 00
215	Mattapoisett,	14 61.3	2,235 85	-	2,235 85	153	-
36	Uxbridge,	14 57.1	8,000 00	-	8,000 00	549	-
45	Canton,	14 56.2	11,090 00	647 61	11,737 61	806	-
69	Brockton,	14 55.8	66,444 60	1,119 11	67,563 71	4,641	-
109	Marshfield,	14 55.3	3,100 00	-	3,100 00	213	-
90	Norwell,	14 54.7	3,200 00	247 67	3,447 67	237	-
73	Holbrook,	14 47.3	6,600 00	-	6,600 00	456	-
118	Foxborough,	14 36.3	6,250 00	457 94	6,707 94	467	-
101	Greenfield,	14 32.7	13,038 28	-	13,038 28	910	-
157	Dennis,	14 29	6,388 91	156 04	6,544 95	458	-
144	Tyngsborough,	14 28.5	1,200 00	-	1,200 00	84	24 00
89	Braintree,	14 21.6	10,400 00	760 23	11,160 23	785	-
145	Tewksbury,	14 20.6	4,545 92	-	4,545 92	320	-
97	Easton,	14 14.8	11,000 00	643 89	11,643 89	823	-
173	Essex,	14 11.3	3,000 00	133 27	3,133 27	222	-
125	Leicester,	14 10.6	7,707 30	361 54	8,068 84	572	-
116	Georgetown,	14 09.4	5,300 00	196 74	5,496 74	390	-
140	Westborough,	14 01.2	11,000 00	-	11,000 00	785	-
107	Pepperell,	14 00	7,000 00	-	7,000 00	500	-
159	Holden,	13 87.1	6,505 59	319 06	6,824 65	492	-
126	Northampton,	13 86.9	33,647 06	971 57	34,618 63	2,496	-
131	Saugus,	13 84.8	9,500 00	-	9,500 00	686	-
93	Ashby,	13 84.3	1,700 00	127 37	1,827 37	132	-
105	South Hadley,	13 83.3	9,350 00	278 11	9,628 11	696	-
123	Haverhill,	13 79	63,575 40	-	63,575 40	4,610	-

Showing the Comparative Amount of Money appropriated by the different Towns in the State — Continued.

For 1890-91.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
196	Ayer, . . . . .	\$13 74.1	\$5,200 00	\$173 01	\$5,373 01	391	-
113	Mills, . . . . .	13 72.8	1,812 20	-	1,812 20	132	-
200	Hanson, . . . . .	13 71.6	2,125 00	179 42	2,304 42	168	-
209	Sharon, . . . . .	13 70.8	3,000 00	153 00	3,153 00	230	-
96	Southwick, . . . . .	13 68.4	1,500 00	87 35	1,587 35	116	-
180	Tolland, . . . . .	13 66.8	500 00	60 42	560 42	41	-
134	Chelmsford, . . . . .	13 66.1	5,700 00	311 22	6,011 22	440	-
233	Brookfield, . . . . .	13 63.1	6,133 93	286 63	6,420 56	471	-
130	Brewster, . . . . .	13 61.9	2,015 74	-	2,015 74	148	-
139	Danvers, . . . . .	13 60.5	15,207 00	466 24	15,673 24	1,152	-
138	Attleborough, . . . . .	13 59.8	16,200 00	771 06	16,971 06	1,248	\$600 00
158	Marlborough, . . . . .	13 53.3	30,749 00	-	30,749 00	2,272	153 04
179	Middleborough, . . . . .	13 53.3	11,544 38	-	11,544 38	853	-
133	Princeton, . . . . .	13 50.6	2,000 00	93 57	2,093 57	155	-
213	Billerica, . . . . .	13 42	5,650 00	-	5,650 00	421	-
84	Westford, . . . . .	13 41.2	4,650 00	84 72	4,734 72	353	-
165	Warren, . . . . .	13 40.1	11,391 00	-	11,391 00	850	-
163	Bradford, . . . . .	13 38.4	8,700 00	-	8,700 00	650	-
148	Quincy, . . . . .	13 38	54,125 00	-	54,125 00	4,045	-
147	Everett, . . . . .	13 36.7	29,048 27	-	29,048 27	2,173	-
124	Rockland, . . . . .	13 35.6	11,300 00	-	11,300 00	846	-
141	Fitchburg, . . . . .	13 33.6	54,025 70	-	54,025 70	4,051	-
166	Boylston, . . . . .	13 33.3	1,600 00	-	1,600 00	120	-
137	West Springfield, . . . . .	13 29.6	12,492 57	218 49	12,711 06	956	-
129	Tisbury, . . . . .	13 29.3	2,500 00	39 10	2,539 10	191	-
261	Sheffield, . . . . .	13 22.5	3,828 02	404 27	4,232 29	320	-



## SCHOOL RETURNS.

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98	161	New Bedford,	.	.	13	21.7	103,008	67	1,291	91	104,300	58	7,891
186	162	Hopkinton,	.	.	13	21.6	8,000	00	1,000	13	9,000	13	681
103	163	Orleans,	.	.	13	21.3	2,000	00	74	32	2,074	32	157
188	164	Chatham,	.	.	13	20.9	3,979	67	115	27	4,094	94	310
161	165	Granville,	.	.	13	19	2,150	00	-	-	2,150	00	163
192	166	Ashland,	.	.	13	16.7	5,556	65	-	-	5,556	65	422
276	167	Cottage City,	.	.	13	16.2	2,185	00	-	-	2,185	00	106
135	168	Holliston,	.	.	13	15.2	6,800	00	-	-	6,800	00	517
153	169	Dighton,	.	.	13	14.5	3,200	00	204	68	3,404	68	259
110	170	Wilmington,	.	.	13	13.3	2,725	00	138	20	2,863	20	218
119	171	Milford,	.	.	13	12	16,441	58	391	71	16,833	29	1,283
162	172	Enfield,	.	.	13	09.5	2,200	00	-	-	2,200	00	168
181	173	Westminster,	.	.	13	09	3,050	00	-	-	3,050	00	233
154	174	Wareham,	.	.	13	02.6	6,500	00	-	-	6,500	00	499
150	175	Edgartown,	.	.	13	00.2	1,950	37	-	-	1,950	37	150
206	176	Methuen,	.	.	12	92.4	11,063	73	387	00	11,450	73	886
281	177	Northfield,	.	.	12	90.1	2,800	00	219	00	3,019	00	234
121	178	Acushnet,	.	.	12	87.4	1,600	00	150	91	1,750	91	136
87	179	Longmeadow,	.	.	12	84.8	4,223	56	234	70	4,458	26	347
227	180	Bolton,	.	.	12	81	1,500	00	165	42	1,665	42	130
171	181	Mendon,	.	.	12	73.3	1,600	00	169	96	1,769	96	139
336	182	Mashpee,	.	.	12	72.6	600	00	61	76	661	76	52
230	183	Norton,	.	.	12	72	2,500	00	298	48	2,798	48	220
217	184	Westport,	.	.	12	70.2	4,500	00	326	84	4,826	84	380
284	185	Pittsfield,	.	.	12	69.2	43,383	43	-	-	43,383	43	3,418
178	186	Whitman,	.	.	12	67.4	10,000	00	-	-	10,000	00	789
164	187	Cheshire,	.	.	12	65.8	3,000	00	-	-	3,000	00	237
156	188	Athol,	.	.	12	52.7	11,286	87	-	-	11,286	87	901
152	189	West Bridgewater,	.	.	12	45.5	3,500	00	-	-	3,500	00	281
220	190	Boxford,	.	.	12	44.8	1,500	00	267	64	1,767	64	142
331	191	Becket,	.	.	12	44.3	1,335	00	83	59	1,418	59	114
197	192	Hudson,	.	.	12	41.2	9,600	00	478	85	10,078	85	812

Showing the Comparative Amount of Money appropriated by the different Towns in the State — Continued.

		TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
For 1890-91.	For 1891-92.							
203	193	Stow, . . . . .	\$12 39.9	\$1,700 00	\$135 09	\$ 1,835 09	148	-
198	194	Hamilton, . . . . .	12 36.8	1,659 25	84 02	1,743 27	141	-
146	195	West Newbury, . . . . .	12 32.7	3,387 53	113 36	3,500 89	284	-
187	196	Beverly, . . . . .	12 32.4	21,349 98	365 94	21,715 92	1,762	-
214	197	Northborough, . . . . .	12 29.7	3,800 00	-	3,800 00	309	-
168	198	Schuette, . . . . .	12 28.7	5,200 00	194 30	5,394 30	439	-
250	199	Ipswich, . . . . .	12 22.2	8,650 00	358 08	9,008 08	737	-
177	200	Woburn, . . . . .	12 13.7	35,224 00	-	35,224 00	2,902	-
193	201	Tyringham, . . . . .	12 12.1	800 00	-	800 00	66	-
345	202	Richmond, . . . . .	12 11.6	1,756 03	340 07	2,096 10	173	-
155	203	Medway, . . . . .	12 11.4	5,500 00	-	5,500 00	454	-
286	204	Hubbardston, . . . . .	12 06.8	2,100 00	-	2,100 00	174	-
247	205	Rutland, . . . . .	12 06.6	1,709 96	100 00	1,809 96	150	-
169	206	Carver, . . . . .	12 06.1	1,650 00	110 97	1,760 97	146	-
167	207	Grafton, . . . . .	12 03.5	11,265 40	-	11,265 40	936	-
256	208	Adams, . . . . .	12 02.3	21,041 75	-	21,041 75	1,750	-
212	209	Rehoboth, . . . . .	11 97.9	3,500 00	297 42	3,797 42	317	-
259	210	Norfolk, . . . . .	11 97.4	1,800 00	139 80	1,939 80	162	-
239	211	Rochester, . . . . .	11 95.8	1,600 00	134 00	1,734 00	145	-
221	212	Orange, . . . . .	11 79.4	9,200 00	-	9,200 00	780	-
205	213	Somerset, . . . . .	11 77.4	3,481 92	286 76	3,768 68	320	-
172	214	Carlisle, . . . . .	11 76.4	1,000 00	-	1,000 00	85	-
271	215	Oxford, . . . . .	11 76.4	5,000 00	-	5,000 00	425	-
176	216	Dunstable, . . . . .	11 74.9	600 00	46 24	646 24	55	-
143	217	Topsfield, . . . . .	11 74.9	1,800 00	115 12	1,915 12	163	-
240	218	Groveland, . . . . .	11 72.5	4,350 00	-	4,350 00	371	-

185	219	Wenham, . . . . .	11	63.2	1,400 00	135 55	1,535 55	132	-
235	220	Gill, . . . . .	11	62.7	1,500 00	-	1,500 00	129	-
100	221	Amherst, . . . . .	11	62.2	7,485 04	-	7,485 04	644	-
232	222	Spencer, . . . . .	11	62	22,694 96	-	22,694 96	1,953	\$80 00
223	223	Worthington, . . . . .	11	61.5	1,000 00	196 40	1,196 40	103	-
234	224	Palmer, . . . . .	11	50.1	13,100 00	460 42	13,560 42	1,179	-
225	225	Blandford, . . . . .	11	49.3	1,850 00	103 86	1,953 86	170	-
339	226	Newbury, . . . . .	11	41.6	2,450 00	107 23	2,557 23	224	-
238	227	Wilbraham, . . . . .	11	41.5	2,500 00	-	2,500 00	219	-
243	228	West Boylston, . . . . .	11	40.6	6,000 00	-	6,000 00	526	-
195	229	Maynard, . . . . .	11	39.5	5,948 45	-	5,948 45	522	30 00
160	230	West Stockbridge, . . . . .	11	35.7	3,700 00	104 68	3,804 68	335	-
300	231	Ludlow, . . . . .	11	32.8	3,900 00	76 29	3,976 29	351	646 00
142	232	Bellingham, . . . . .	11	28.5	2,000 00	324 76	2,324 76	206	-
189	233	Hanover, . . . . .	11	27.8	3,650 00	207 20	3,857 20	342	-
183	234	West Brookfield, . . . . .	11	27.8	3,000 00	-	3,000 00	266	-
191	235	Ashburnham, . . . . .	11	23.3	3,999 00	-	3,999 00	356	-
274	236	Burlington, . . . . .	11	23.1	1,200 00	102 87	1,302 87	116	-
211	237	Avon, . . . . .	11	22.5	2,952 22	-	2,952 22	263	-
175	238	Douglas, . . . . .	11	22.4	4,400 00	-	4,400 00	392	-
253	239	Freetown, . . . . .	11	11.5	2,000 00	189 75	2,189 75	197	-
259	240	Buckland, . . . . .	11	08.8	2,500 00	61 50	2,561 50	231	-
99	241	Merrimac, . . . . .	11	06.5	7,069 51	160 62	7,230 13	563	-
328	242	Oakham, . . . . .	10	98	750 00	150 38	900 38	82	-
312	243	Fall River, . . . . .	10	97.3	163,570 06	-	163,570 06	14,906	2,471 00
252	244	Shirley, . . . . .	10	97.1	2,467 64	132 49	2,600 13	237	-
237	245	Clinton, . . . . .	10	90.8	21,565 99	-	21,565 99	1,977	-
228	246	Lenox, . . . . .	10	89.7	5,100 00	-	5,100 00	468	-
210	247	Phillipston, . . . . .	10	87.6	950 00	83 23	1,033 23	95	-
201	248	Duxbury, . . . . .	10	76.8	3,000 00	273 64	3,273 64	304	-
229	249	Hinsdale, . . . . .	10	74.6	3,600 00	-	3,600 00	335	-
260	250	Middlefield, . . . . .	10	74.6	800 00	6 00	806 00	75	-

BOARD OF EDUCATION.

*Showing the Comparative Amount of Money appropriated by the different Towns in the State — Continued.*

For 1890-91.	TOWNS.			Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
231	251	Truro, . . . . .	\$10 73.9	\$1,700 00	\$72 00	\$1,772 00	165	-	
207	252	Westhampton, . . . . .	10 71.4	895 60	36 60	932 20	87	-	
241	253	Holyoke, . . . . .	10 69.4	74,748 52	1,650 51	76,399 03	7,144	-	
293	254	Provincetown, . . . . .	10 67.6	9,000 00	-	9,000 00	843	-	
226	255	Williamstown, . . . . .	10 67.3	7,193 89	-	7,193 89	674	-	
292	256	Franklin, . . . . .	10 64	10,215 09	542 80	10,757 89	1,011	-	
262	257	Rockport, . . . . .	10 60.1	6,583 58	-	6,583 58	621	-	
302	258	Royalston, . . . . .	10 59.3	1,500 00	194 97	1,694 97	160	-	
273	259	Pembroke, . . . . .	10 55.1	1,908 77	190 97	2,099 74	199	-	
263	260	Conway, . . . . .	10 50.9	2,486 37	67 54	2,553 91	243	-	
254	261	Deerfield, . . . . .	10 35.9	5,000 00	128 00	5,128 00	495	-	
242	262	Halifax, . . . . .	10 30.9	1,000 00	-	1,000 00	97	-	
266	263	Stoughton, . . . . .	10 28.6	9,782 19	-	9,782 19	951	-	
224	264	Middleton, . . . . .	10 26.5	1,600 00	83 56	1,683 56	104	-	
277	265	New Salem, . . . . .	10 23.7	1,210 00	69 63	1,279 63	125	-	
246	266	Hawley, . . . . .	10 22.7	900 00	-	900 00	88	-	
248	267	Berkley, . . . . .	10 21	1,423 00	118 86	1,541 86	151	-	
330	268	New Marlborough, . . . . .	10 20.8	2,000 00	296 98	2,296 98	225	-	
344	269	Pelham, . . . . .	10 15.9	788 85	84 90	873 75	86	-	
342	270	Chilmark, . . . . .	10 13.6	350 00	14 92	364 92	36	-	
255	271	North Brookfield, . . . . .	10 13.5	7,800 00	419 80	8,219 80	811	-	
199	272	Monson, . . . . .	10 13.2	6,100 00	364 84	6,464 84	638	-	
257	273	Montague, . . . . .	10 08	12,691 73	-	12,691 73	1,259	-	
291	274	Sturbridge, . . . . .	10 05.7	3,500 00	-	3,500 00	348	-	
323	275	Lunenburg, . . . . .	10 05	2,000 00	-	2,000 00	199	-	
306	276	Lynnfield, . . . . .	10 02.8	1,000 00	83 09	1,083 09	108	-	

## SCHOOL RETURNS.

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277	Belchertown,	.	.	.	10 00.2	4,100 83	-	4,100 83	410
278	Plympton,	.	.	.	10 00	800 00	-	800 00	80
279	Dartmouth,	.	.	.	9 99.8	5,000 00	229 19	5,229 19	523
280	Blackstone,	.	.	.	9 96.8	9,500 00	-	9,500 00	953
281	Salisbury,	.	.	.	9 94.5	1,991 95	116 52	2,108 47	212
282	Charlton,	.	.	.	9 92.9	3,097 86	-	3,097 86	312
283	Agawam,	.	.	.	9 89.5	4,275 07	-	4,275 07	432
284	Berlin,	.	.	.	9 89.4	1,100 00	57 68	1,157 68	117
285	Peru,	.	.	.	9 87.6	300 00	55 54	355 54	36
286	Lawrence,	.	.	.	9 87.3	86,652 13	-	86,652 13	8,776
287	Hadley,	.	.	.	9 83.6	3,000 00	-	3,000 00	305
288	Nantucket,	.	.	.	9 80.1	5,383 44	154 20	5,537 64	565
289	Rowley,	.	.	.	9 60	1,948 80	-	1,948 80	203
290	Leyden,	.	.	.	9 54.8	500 00	15 60	515 60	54
291	Chesterfield,	.	.	.	9 50.5	900 00	60 08	960 08	101
292	Millbury,	.	.	.	9 43.3	9,000 00	-	9,000 00	954
293	Hampden,	.	.	.	9 42.7	1,300 00	19 91	1,319 91	140
294	Gardner,	.	.	.	9 37.7	14,016 04	50 00	14,066 04	1,500
295	New Ashford,	.	.	.	9 35.6	150 00	18 42	168 42	18
296	North Adams,	.	.	.	9 33.4	29,623 60	471 72	30,095 32	3,224
297	Seekonk,	.	.	.	9 25.7	2,200 00	225 46	2,425 46	262
298	Huntington,	.	.	.	9 21.3	2,000 00	162 70	2 162 70	238
299	Williamsburg,	.	.	.	9 15.8	3,000 00	178 00	3,178 00	347
300	Templeton,	.	.	.	9 12.5	5,000 00	229 00	5,229 00	573
301	Hatfield,	.	.	.	8 97.7	2,000 00	127 62	2,127 62	237
302	Brimfield,	.	.	.	8 97.4	1,400 00	-	1,400 00	156
303	Dracut,	.	.	.	8 95.5	3,000 00	-	3,000 00	335
304	Heath,	.	.	.	8 91	900 00	35 57	935 57	105
305	Warwick,	.	.	.	8 90.1	810 00	-	810 00	91
306	Holland,	.	.	.	8 84.3	200 00	29 94	229 94	26
307	Lanesborough,	.	.	.	8 77.6	1,800 00	34 26	1,834 26	209
308	Dana,	.	.	.	8 70.4	700 00	92 08	792 08	91
299	Belchertown,	.	.	.	10 00.2	4,100 83	-	4,100 83	410
202	Plympton,	.	.	.	10 00	800 00	-	800 00	80
208	Dartmouth,	.	.	.	9 99.8	5,000 00	229 19	5,229 19	523
265	Blackstone,	.	.	.	9 96.8	9,500 00	-	9,500 00	953
251	Salisbury,	.	.	.	9 94.5	1,991 95	116 52	2,108 47	212
245	Charlton,	.	.	.	9 92.9	3,097 86	-	3,097 86	312
222	Agawam,	.	.	.	9 89.5	4,275 07	-	4,275 07	432
151	Berlin,	.	.	.	9 89.4	1,100 00	57 68	1,157 68	117
279	Peru,	.	.	.	9 87.6	300 00	55 54	355 54	36
272	Lawrence,	.	.	.	9 87.3	86,652 13	-	86,652 13	8,776
269	Hadley,	.	.	.	9 83.6	3,000 00	-	3,000 00	305
295	Nantucket,	.	.	.	9 80.1	5,383 44	154 20	5,537 64	565
289	Rowley,	.	.	.	9 60	1,948 80	-	1,948 80	203
236	Leyden,	.	.	.	9 54.8	500 00	15 60	515 60	54
283	Chesterfield,	.	.	.	9 50.5	900 00	60 08	960 08	101
244	Millbury,	.	.	.	9 43.3	9,000 00	-	9,000 00	954

Showing the Comparative Amount of Money appropriated by the different Towns in the State — Concluded.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
301	309	Florida,	\$8 70.1	\$983 27	—	\$983 27	113	—
303	310	Dudley,	8 68.3	5,180 19	\$168 54	5,348 73	616	—
280	311	Newburyport,	8 66.7	21,461 63	—	21,461 63	2,476	—
343	312	Alford,	8 55.2	297 53	27 47	325 00	38	—
290	313	Otis,	8 52.3	900 00	46 14	946 14	111	—
298	314	Ware,	8 51.8	13,000 00	—	13,000 00	1,526	—
288	315	Southampton,	8 35.4	1,450 00	137 28	1,587 28	190	—
296	316	Hardwick,	8 31	3,920 00	251 78	4,171 78	502	—
294	317	Southbridge,	8 30.4	13,619 71	—	13,619 71	1,640	—
321	318	Amesbury,	8 11.4	13,251 35	—	13,251 35	1,633	—
278	319	Washington,	7 97.6	750 00	47 69	797 69	100	—
347	320	Clarksburg,	7 86.9	1,000 00	62 34	1,062 34	135	—
337	321	Chicopee,	7 82.1	19,898 39	—	19,898 39	2,544	—
308	322	Monterey,	7 71.1	700 00	32 57	732 57	95	—
311	323	Gosnold,	7 69.2	100 00	—	100 00	13	—
219	324	Sandisfield,	7 69.2	1,200 00	—	1,200 00	156	—
318	325	Sutton,	7 47.7	4,800 00	284 55	5,084 55	680	—
326	326	Erving,	7 47.6	1,300 00	83 11	1,383 11	185	—
305	327	Wendell,	7 32.8	617 43	34 82	652 25	89	—
297	328	Russell,	7 31.6	1,302 31	—	1,302 31	178	—
322	329	Colrain,	7 30.4	2,600 00	73 38	2,673 38	366	—
340	330	Webster,	7 20.2	9,091 76	486 91	9,578 67	1,330	—
329	331	Winchendon,	7 19.5	5,512 02	—	5,512 02	766	—
324	332	Savoy,	7 12.9	600 00	55 88	655 88	92	—
319	333	Goshen,	6 86.2	350 00	—	350 00	51	—
287	334	Rowe,	6 85.1	600 00	30 32	630 32	92	—



## SCHOOL RETURNS.

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316	335	Chester,	.	.	.	6 83.7	1,600 00	-	1,600 00	234	-
341	336	Windsor,	.	.	.	6 82	800 00	59 41	859 41	126	-
338	337	Hancock,	.	.	.	6 79.6	700 00	-	700 00	103	-
314	338	Plainfield,	.	.	.	6 79.1	450 60	45 75	495 75	73	-
194	339	Paxton,	.	.	.	6 61.1	423 12	-	423 12	64	-
333	340	Charlemont,	.	.	.	6 53.9	1,200 00	81 82	1,281 82	196	-
325	341	Auburn,	.	.	.	6 49.8	1,800 00	-	1,800 00	277	\$16 00
332	342	Leverett,	.	.	.	6 45.8	775 00	-	775 00	120	-
327	343	Whately,	.	.	.	6 34.9	1,200 00	-	1,200 00	189	-
334	344	Shutesbury,	.	.	.	6 33.6	500 00	44 93	544 93	86	-
335	345	Greenwich,	.	.	.	5 97.9	460 42	-	460 42	77	-
264	346	Prescott,	.	.	.	5 88.2	300 00	-	300 00	51	-
346	347	Wales,	.	.	.	5 20.3	700 00	64 88	764 88	147	-
349	348	Monroe,	.	.	.	4 90.9	200 00	25 83	225 83	46	-
348	349	Mount Washington,	.	.	.	3 90.7	60 00	18 14	78 14	20	-
351	350	Gay Head,	.	.	.	3 00	75 00	-	75 00	25	-
320	351	Cummington,	.	.	.	2 42.5	200 00	91 00	291 00	120	-

## GRADUATED TABLES — (COUNTY TABLES) — FIRST SERIES.

Table showing the Comparative Amount of Money appropriated by the different Towns in each of the Counties in the State for the Education of each Child in the Town between the Ages of 5 and 15 Years.

## BARNSTABLE COUNTY.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
5	1	YARMOUTH, . . . . .	\$26 75	\$3,700 00	\$366 00	\$4,066 00	152	\$100 00
2	2	Wellfleet, . . . . .	21 69.1	3,500 00	79 09	3,579 09	165	—
4	3	Barnstable, . . . . .	20 90.8	12,015 68	403 77	12,419 45	594	—
1	4	Falmouth, . . . . .	20 68.4	7,500 00	422 13	7,922 13	383	—
9	5	Bourne, . . . . .	20 67.1	4,951 00	279 00	5,230 00	253	—
3	6	Sandwich, . . . . .	20 64.8	4,943 63	259 90	5,203 53	252	—
11	7	Eastham, . . . . .	17 77	1,100 00	55 05	1,155 05	65	—
7	8	Harwich, . . . . .	15 44.5	5,500 00	168 59	5,668 59	367	—
10	9	Dennis, . . . . .	14 29	6,388 91	156 04	6,544 95	458	—
8	10	Brewster, . . . . .	13 61.9	2,015 74	—	2,015 74	148	—
6	11	Orleans, . . . . .	13 21.2	2,000 00	74 32	2,074 32	157	—
12	12	Chatham, . . . . .	13 20.9	3,979 67	115 27	4,094 94	310	—
15	13	Mashpee, . . . . .	12 72.6	600 00	61 76	661 76	52	—
13	14	Truro, . . . . .	10 73.9	1,700 00	72 00	1,772 00	165	—
14	15	Provincetown, . . . . .	10 67.6	9,000 00	—	9,000 00	843	—

## BERKSHIRE COUNTY.

1	1	STOCKBRIDGE, . . . . .	\$21 74.8	\$6,241 75	—	\$6,241 75	287	—
21	2	Egremont, . . . . .	19 92.3	1,000 00	\$36 04	1,036 04	52	—

# SCHOOL RETURNS.

XCV

2	Great Barrington,	17	34.2	11,000	00	844	79	11,844	79	683	-
6	Lee, . . . . .	14	98.4	9,740	00	-	-	9,740	00	650	-
5	Dalton, . . . . .	14	66.9	6,865	39	-	-	6,865	39	468	-
13	Sheffield, . . . . .	13	22.5	3,828	02	404	27	4,232	29	320	-
17	Pittsfield, . . . . .	12	69.2	43,383	43	-	-	43,383	43	3,418	-
4	Cheshire, . . . . .	12	65.8	3,000	00	-	-	3,000	00	237	-
25	Becket, . . . . .	12	44.3	1,335	00	83	59	1,418	59	114	-
7	Tyringham, . . . . .	12	12.1	800	00	-	-	800	00	66	-
29	Richmond, . . . . .	12	11.6	1,756	03	340	07	2,096	10	173	-
12	Adams, . . . . .	12	02.3	21,041	75	-	-	21,041	75	1,750	-
3	West Stockbridge,	11	35.7	3,700	00	104	68	3,804	68	335	-
10	Lenox, . . . . .	10	89.7	5,100	00	-	-	5,100	00	468	-
11	Hinsdale, . . . . .	10	74.6	3,600	00	-	-	3,600	00	335	-
9	Williamstown, . . . . .	10	67.3	7,193	89	-	-	7,193	89	674	-
24	New Marlborough,	10	20.8	2,000	00	296	98	2,296	98	225	-
15	Peru, . . . . .	9	87.6	300	00	55	54	355	54	36	-
32	New Ashford, . . . . .	9	35.6	150	00	18	42	168	42	18	-
16	North Adams, . . . . .	9	33.4	29,623	60	471	72	30,095	32	3,224	-
22	Lanesborough, . . . . .	8	77.6	1,800	00	34	26	1,834	26	209	-
19	Florida, . . . . .	8	70.1	983	27	-	-	983	27	113	-
23	Alford, . . . . .	8	55.2	297	53	27	47	325	00	38	-
18	Otis, . . . . .	8	52.3	900	00	46	14	946	14	111	-
25	Washington, . . . . .	7	97.6	750	00	47	69	797	69	100	-
30	Clarksburg, . . . . .	7	86.9	1,000	00	62	34	1,062	34	135	-
20	Monterey, . . . . .	7	71.1	700	00	32	57	732	57	95	-
8	Sandwichfield, . . . . .	7	69.2	1,200	00	-	-	1,200	00	156	-
23	Savoy, . . . . .	7	12.9	600	00	55	88	655	88	92	-
27	Windsor, . . . . .	6	82	800	00	59	41	859	41	126	-
26	Hancock, . . . . .	6	79.6	700	00	-	-	700	00	103	-
31	Mount Washington,	3	90.7	60	00	18	14	78	14	20	-

## BRISTOL COUNTY.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
3	1	RAVHAM,	\$17 54.7	\$3,000 00	\$263 84	\$3,263 84	186	-
6	2	Mansfield,	16 13.9	7,827 84	467 73	8,295 57	514	-
2	3	Taunton,	15 95.7	67,948 87	-	67,948 87	4,258	-
7	4	North Attleborough,	15 69.5	17,450 00	992 33	18,442 33	1,175	-
8	5	Swansea,	15 33.7	3,130 15	228 69	13,358 84	219	-
1	6	Fairhaven,	15 23	6,500 00	368 84	6,868 84	451	-
4	7	Easton,	14 14.8	11,000 00	643 89	11,643 89	823	-
10	8	Attleborough,	13 59.8	16,200 00	771 06	16,971 06	1,248	\$600 00
5	9	New Bedford,	13 21.7	103,008 67	1,291 91	104,300 58	7,891	-
11	10	Dighton,	13 14.5	3,200 00	204 68	3,404 68	259	-
9	11	Acushnet,	12 87.4	1,600 00	150 91	1,750 91	136	-
16	12	Norton,	12 72	2,500 00	298 48	2,798 48	220	-
15	13	Westport,	12 70.2	4,500 00	326 84	4,826 84	380	-
14	14	Rehoboth,	11 97.9	3,500 00	297 42	3,797 42	317	-
12	15	Somerset,	11 77.4	3,481 92	286 76	3,768 68	320	-
18	16	Freetown,	11 11.5	2,000 00	189 75	2,189 75	197	-
20	17	Fall River,	10 97.3	163,570 06	-	163,570 06	14,906	2,471 00
17	18	Berkley,	10 21	1,423 00	118 86	1,541 86	151	-
13	19	Dartmouth,	9 99.8	5,000 00	229 19	5,229 19	523	-
19	20	Seekonk,	9 25.7	2,200 00	225 46	2,425 46	262	-

## DUKES COUNTY.

1	1	TISBURY,	\$13 29.3	\$2,500 00	\$39 10	\$2,539 10	191	-
3	2	Cottage City,	13 16.2	2,185 00	-	2,185 00	166	-

## ESSEX COUNTY.

2	Edgartown, . . . . .	13 00.2	1,950 37	-	1,950 37	150
5	Chilmark, . . . . .	10 13.6	350 00	14 92	364 92	36
4	Gosnold, . . . . .	7 69.2	100 00	-	100 00	13
6	Gay Head, . . . . .	3 00	75 00	-	75 00	25
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1	MARANT, . . . . .	\$32 87.1	\$4,174 71	-	\$4,174 71	127
2	Swampscott, . . . . .	26 11.5	9,114 48	-	9,114 48	349
3	Manchester, . . . . .	23 03.3	4,906 07	-	4,906 07	213
5	Peabody, . . . . .	16 69.2	30,500 00	\$714 46	31,214 46	1,870
7	Andover, . . . . .	16 31.9	16,000 00	140 00	16,140 00	989
8	North Andover, . . . . .	16 20.5	10,890 00	-	10,890 00	672
9	Lynn, . . . . .	16 16.1	134,865 76	-	134,865 76	8,345
14	Marblehead, . . . . .	15 94.5	16,470 19	383 92	16,854 11	1,057
4	Gloucester, . . . . .	15 50.2	55,893 97	1,450 05	57,344 02	3,699
6	Salem, . . . . .	15 50.1	81,311 10	2,381 13	83,692 23	5,399
19	Essex, . . . . .	14 11.3	3,000 00	133 27	3,133 27	222
11	Georgetown, . . . . .	14 09.4	5,300 00	196 74	5,496 74	390
13	Saugus, . . . . .	13 84.8	9,500 00	-	9,500 00	686
12	Haverhill, . . . . .	13 79	63,575 40	-	63,575 40	4,610
15	Danvers, . . . . .	13 60.5	15,207 00	466 24	15,673 24	1,152
18	Bradford, . . . . .	13 38.4	8,700 00	-	8,700 00	650
23	Methuen, . . . . .	12 92.4	11,063 73	387 00	11,450 73	886
24	Boxford, . . . . .	12 44.8	1,500 00	267 64	1,767 64	142
22	Hamilton, . . . . .	12 36.3	1,659 25	84 02	1,743 27	141
17	West Newbury, . . . . .	12 32.7	3,387 53	113 36	3,500 89	284
21	Beverly, . . . . .	12 32.4	21,349 98	365 94	21,715 92	1,762
27	Ipswich, . . . . .	12 22.2	8,650 00	358 08	9,008 08	737
16	Topsfield, . . . . .	11 74.9	1,800 00	115 12	1,915 12	163
26	Groveland, . . . . .	11 72.5	4,350 00	-	4,350 00	371

## ESSEX COUNTY — CONCLUDED.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by town for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
20	25	Wenham, . . . . .	\$11 63.2	\$1,400 00	\$135 55	\$1,535 55	132	-
35	26	Newbury, . . . . .	11 41.6	2,450 00	107 23	2,557 23	224	-
10	27	Merrimac, . . . . .	11 06.5	7,069 51	160 62	7,230 13	563	-
29	28	Rockport, . . . . .	10 60.1	6,583 58	-	6,583 58	621	-
25	29	Middleton, . . . . .	10 26.5	1,600 00	83 56	1,683 56	164	-
33	30	Lynnfield, . . . . .	10 02.8	1,000 00	83 09	1,083 09	108	-
28	31	Salisbury, . . . . .	9 94.5	1,991 95	116 52	2,108 47	212	-
30	32	Lawrence, . . . . .	9 87.3	86,652 13	-	86,652 13	8,776	-
32	33	Rowley, . . . . .	9 60	1,948 80	-	1,948 80	203	-
31	34	Newburyport, . . . . .	8 66.7	21,461 63	-	21,461 63	2,476	-
34	35	Amesbury, . . . . .	8 11.4	13,251 35	-	13,251 35	1,633	-

## FRANKLIN COUNTY.

5	1	SUNDERLAND, . . . . .	\$17 44.1	\$1,500 00	-	\$1,500 00	86	-
1	2	Barnardston, . . . . .	16 79.6	2,050 00	\$66 35	2,116 35	126	-
2	3	Ashfield, . . . . .	16 17.1	1,800 00	92 10	1,892 10	117	-
3	4	Shelburne, . . . . .	15 63.5	3,000 00	80 12	3,080 12	197	-
4	5	Greenfield, . . . . .	14 32.7	13,038 28	-	13,038 28	910	-
16	6	Northfield, . . . . .	12 90.1	2,800 00	219 00	3,019 00	234	-
6	7	Orange, . . . . .	11 79.4	9,200 00	-	9,200 00	780	-
7	8	Gill, . . . . .	11 62.7	1,500 00	-	1,500 00	129	-
12	9	Buckland, . . . . .	11 08.8	2,500 00	61 50	2,561 50	231	-
13	10	Conway, . . . . .	10 50.9	2,486 37	67 54	2,553 91	243	-



## SCHOOL RETURNS.

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10	Deerfield, . . . . .	10 35.9	5,000 00	128 00	5,128 00	495	-
15	New Salem, . . . . .	10 23.7	1,210 00	69 63	1,279 63	125	-
9	Hawley, . . . . .	10 22.7	900 00	-	900 00	88	-
11	Montague, . . . . .	10 08	12,691 73	-	12,691 73	1,259	-
8	Leyden, . . . . .	9 54.8	500 00	15 60	515 60	54	-
14	Heath, . . . . .	8 91	900 00	35 57	935 57	105	-
17	Warwick, . . . . .	8 90.1	810 00	-	810 00	91	-
21	Erving, . . . . .	7 47.6	1,300 00	83 11	1,383 11	185	-
19	Wendell, . . . . .	7 32.8	617 43	34 82	652 25	89	-
20	Colrain, . . . . .	7 30.4	2,600 00	73 38	2,673 38	366	-
18	Rowe, . . . . .	6 85.1	600 00	30 32	630 32	92	-
24	Charlemont, . . . . .	6 53.9	1,200 00	81 82	1,281 82	196	-
23	Leverett, . . . . .	6 45.8	775 00	-	775 00	120	-
22	Whately, . . . . .	6 34.9	1,200 00	-	1,200 00	189	-
25	Shutesbury, . . . . .	6 33.6	500 00	44 93	544 93	86	-
26	Monroe, . . . . .	4 90.9	200 00	25 83	225 83	46	-

## HAMPDEN COUNTY.

1	SPRINGFIELD, . . . . .	\$18 51.8	\$132,111 07	-	\$132,111 07	7,134	-
5	Montgomery, . . . . .	16 80	500 00	\$54 43	554 43	33	\$30 00
2	Westfield, . . . . .	14 66.4	24,357 01	-	24,357 01	1,661	-
4	Southwick, . . . . .	13 68.4	1,500 00	87 35	1,587 35	116	-
8	Tolland, . . . . .	13 66.8	500 00	60 42	560 42	41	-
6	West Springfield, . . . . .	13 29.6	12,492 57	218 49	12,711 06	956	-
7	Granville, . . . . .	13 19	2,150 00	-	2,150 00	163	-
3	Loungmeadow, . . . . .	12 84.8	4,223 56	234 70	4,458 26	347	-
12	Palmer, . . . . .	11 50.1	13,100 00	460 42	13,560 42	1,179	-
11	Blandford, . . . . .	11 49.3	1,850 00	103 86	1,953 86	170	-
13	Wilbraham, . . . . .	11 41.5	2,500 00	-	2,500 00	219	-
17	Ludlow, . . . . .	11 32.8	3,900 00	76 29	3,976 29	351	646 00

## BOARD OF EDUCATION.

## HAMPDEN COUNTY — CONCLUDED.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
14	13	Holyoke,	\$10 69.4	\$74,748 52	\$1,650 51	\$76,399 03	7,144	-
9	14	Monson,	10 13.2	6,100 00	364 84	6,464 84	638	-
10	15	Agawam,	9 89.5	4,275 07	-	4,275 07	432	-
18	16	Hampden,	9 42.7	1,300 00	19 91	1,319 91	140	-
19	17	Brimfield,	8 97.4	1,400 00	-	1,400 00	156	-
15	18	Holland,	8 84.3	200 00	29 94	229 94	26	-
21	19	Chicopee,	7 82.1	19,898 39	-	19,898 39	2,544	-
16	20	Russell,	7 31.6	1,302 31	-	1,302 31	178	-
20	21	Chester,	6 83.7	1,600 00	-	1,600 00	234	-
22	22	Wales,	5 20.3	100 00	64 88	164 88	147	-

## HAMPSHIRE COUNTY.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
1	1	GRANBY,	\$15 82.1	\$1,600 40	\$108 30	\$1,708 70	108	-
6	2	Easthampton,	15 39.1	12,000 00	328 95	12,328 95	801	-
4	3	Northampton,	13 86.9	33,647 06	971 57	34,618 63	2,496	-
3	4	South Hadley,	13 83.3	9,350 00	278 11	9,628 11	696	-
5	5	Enfield,	13 09.5	2,200 00	-	2,200 00	168	-
2	6	Amherst,	11 62.2	7,485 04	-	7,485 04	644	-
8	7	Worthington,	11 61.5	1,000 00	196 40	1,196 40	103	-
9	8	Middlefield,	10 74.6	800 00	6 00	806 00	75	-
7	9	Westhampton,	10 71.4	895 60	36 60	932 20	87	-
23	10	Pelham,	10 15.9	788 85	84 90	873 75	86	-

## SCHOOL RETURNS.

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## MIDDLESEX COUNTY.

17	11	Belchertown,	.	.	10 00.2	4,100 83	-	4,100 83	410	-
12	12	Hadley,	.	.	9 83.6	3,000 00	-	3,000 00	305	-
13	13	Chesterfield,	.	.	9 50.5	900 00	60 08	960 08	101	-
14	14	Huntington,	.	.	9 21.3	2,000 00	162 70	2,162 70	238	-
18	15	Williamsburg,	.	.	9 15.8	3,000 00	178 00	3,178 00	347	-
11	16	Hatfield,	.	.	8 97.7	2,000 00	127 62	2,127 62	237	-
16	17	Ware,	.	.	8 51.8	13,000 00	-	13,000 00	1,526	-
15	18	Southampton,	.	.	8 35.4	1,450 00	137 28	1,587 28	190	-
20	19	Goshen,	.	.	6 86.2	350 00	-	350 00	51	-
19	20	Plainfield,	.	.	6 79.1	450 00	45 75	495 75	73	-
22	21	Greenwich,	.	.	5 97.9	460 42	-	460 42	77	-
10	22	Prescott,	.	.	5 88.2	300 00	-	300 00	51	-
21	23	Cummington,	.	.	2 42.5	200 00	91 00	291 00	120	-

1	1	WESTON,	.	.	\$32 28.6	\$7,200 00	-	\$7,200 00	223	-
2	2	Newton,	.	.	25 73.7	111,390 72	\$2,781 18	114,171 90	4,436	-
6	3	Lexington,	.	.	21 82	9,819 16	-	9,819 16	450	-
5	4	Concord,	.	.	21 17.4	13,424 85	-	13,424 85	634	-
3	5	Medford,	.	.	20 88.8	39,770 83	-	39,770 83	1,904	-
7	6	Waltham,	.	.	20 84.4	55,111 83	-	55,111 83	2,644	-
4	7	Arlington,	.	.	20 30.9	20,045 33	-	20,045 33	987	-
11	8	Groton,	.	.	19 35.4	6,000 00	-	6,000 00	310	-
8	9	Belmont,	.	.	19 02.4	7,324 54	-	7,324 54	385	-
9	10	Littleton,	.	.	18 98.6	3,239 76	139 76	3,379 52	178	-
13	11	Winchester,	.	.	18 77.7	17,350 00	-	17,350 00	924	-
10	12	Sherborn,	.	.	18 66.5	2,725 00	112 20	2,837 20	152	-
14	13	Somerville,	.	.	18 62.4	126,646 46	-	126,646 46	6,800	-
12	14	Cambridge,	.	.	18 38.9	223,615 46	-	223,615 46	12,160	-
16	15	Acton,	.	.	18 03.4	4,400 00	180 80	4,580 80	254	-

## MIDDLESEX COUNTY — CONCLUDED.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
21	16	Bedford,	\$17 80.8	\$2,600 00	-	\$2,600 00	146	-
18	17	Lincoln,	17 50	2,800 00	-	2,800 00	160	-
19	18	Reading,	17 48.8	11,000 00	-	11,000 00	629	-
30	19	Townsend,	17 24.1	3,500 00	-	3,500 00	203	-
15	20	Malden,	17 11.7	66,313 07	-	66,313 07	3,874	-
17	21	Watertown,	16 22.4	20,345 55	-	20,345 55	1,254	-
24	22	Frammingham,	15 97.9	25,250 00	\$1,227 68	26,477 68	1,657	-
20	23	Wakefield,	15 70	19,202 24	-	19,202 24	1,223	-
26	24	North Reading,	15 47.6	2,275 00	-	2,275 00	147	-
25	25	Melrose,	15 30.7	24,812 95	-	24,812 95	1,621	-
29	26	Lowell,	15 20.6	193,868 35	-	193,868 35	12,749	-
22	27	Stoneham,	15 19.9	14,500 00	-	14,500 00	954	-
34	28	Wayland,	14 84.5	5,700 00	119 50	5,819 00	392	-
23	29	Boxborough,	14 81.4	800 00	-	800 00	54	-
35	30	Sudbury,	14 76.2	2,777 29	130 93	2,908 22	197	-
33	31	Natick,	14 69.8	24,148 98	-	24,148 98	1,643	-
38	32	Tyngsborough,	14 28.5	1,200 00	-	1,200 00	84	\$24 00
39	33	Tewksbury,	14 20.6	4,545 92	-	4,545 92	320	-
31	34	Pepperell,	14 00	7,000 00	-	7,000 00	500	-
28	35	Ashby,	13 84.3	1,700 00	127 37	1,827 37	132	-
48	36	Ayer,	13 74.1	5,200 00	173 01	5,373 01	391	-
36	37	Chelmsford,	13 66.1	5,700 00	311 22	6,011 22	440	-
41	38	Marlborough,	13 53.3	30,749 00	-	30,749 00	2,272	153 04
51	39	Billerica,	13 42	5,650 00	-	5,650 00	421	-
27	40	Westford,	13 41.2	4,650 00	84 72	4,734 72	353	-
40	41	Everett,	13 36.7	29,048 27	-	29,048 27	2,173	-

45	42	Hopkinton, .	13 21.6	8,000 00	1,000 13	9,000 13	681
46	43	Ashland, .	13 16.7	5,556 65	-	5,556 65	422
37	44	Holliston, .	13 15.2	6,800 00	-	6,800 00	517
32	45	Wilmington, .	13 13.3	2,725 00	138 20	2,863 20	218
49	46	Hudson, .	12 41.2	9,600 00	478 85	10,078 85	812
50	47	Stowe, .	12 39.9	1,700 00	135 09	1,835 09	148
44	48	Woburn, .	12 13.7	35,224 00	-	35,224 00	2,902
42	49	Carlisle, .	11 76.4	1,000 00	-	1,000 00	85
43	50	Dunstable, .	11 74.9	600 00	46 24	646 24	55
47	51	Maynard, .	11 39.5	5,948 45	-	5,948 45	522
54	52	Burlington, .	11 23.1	1,200 00	102 87	1,302 87	116
53	53	Shirley, .	10 97.1	2,467 64	132 49	2,600 13	237
52	54	Dracut, .	8 95.5	3,000 00	-	3,000 00	335
							30 00

## NANTUCKET COUNTY.

		NANTUCKET, .	\$9 80.1	\$5,383 44	\$154 20	\$5,537 64	565
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## NORFOLK COUNTY.

1	1	BROOKLINE, .	\$35 88.8	\$74,600 00	-	\$74,600 00	2,077
2	2	Milton, .	27 72.2	19,683 10	-	19,683 10	710
4	3	Dedham, .	24 97	29,165 97	-	29,165 97	1,168
3	4	Wellesley, .	24 44	12,440 98	-	12,440 98	509
5	5	Cohasset, .	22 90.6	7,503 24	\$239 21	7,742 45	338
7	6	Dover, .	22 69.2	2,360 00	-	2,360 00	104
12	7	Walpole, .	21 65.2	8,000 00	336 34	8,336 34	385
6	8	Needham, .	21 32.5	10,300 00	-	10,300 00	483

## NORFOLK COUNTY — CONCLUDED.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
13	9	Weymouth, .	\$17 69.5	\$30,497 64	\$948 00	\$31,445 64	1,777	-
10	10	Medfield, .	17 53.5	3,700 00	-	3,700 00	211	-
14	11	Wrentham, .	16 40.6	7,200 00	346 87	7,546 87	460	-
9	12	Norwood, .	16 30.2	10,645 31	-	10,645 31	653	-
16	13	Hyde Park, .	15 71.1	30,165 55	-	30,165 55	1,920	-
8	14	Randolph, .	15 35.4	8,430 62	474 78	8,905 40	580	-
11	15	Canton, .	14 56.2	11,090 00	647 61	11,737 61	806	\$600 00
15	16	Holbrook, .	14 47.3	6,600 00	-	6,600 00	456	-
19	17	Foxborough, .	14 36.3	6,250 00	457 94	6,707 94	467	-
17	18	Braintree, .	14 21.6	10,400 00	760 23	11,160 23	785	-
18	19	Millis, .	13 72.8	1,812 20	-	1,812 20	132	-
23	20	Sharon, .	13 70.8	3,000 00	153 00	3,153 00	230	-
21	21	Quincy, .	13 38	54,125 00	-	54,125 00	4,045	-
22	22	Medway, .	12 11.4	5,500 00	-	5,500 00	454	-
25	23	Norfolk, .	11 97.4	1,800 00	139 80	1,939 80	162	-
20	24	Bellingham, .	11 28.5	2,000 00	324 76	2,324 76	206	-
24	25	Avon, .	11 22.5	2,952 22	-	2,952 22	263	-
27	26	Franklin, .	10 64	10,215 09	542 80	10,757 89	1,011	-
26	27	Stoughton, .	10 28.6	9,782 19	-	9,782 19	951	-

## PLYMOUTH COUNTY.

4	1	MILL, .	\$26 71.1	\$2,377 30	-	\$2,377 30	89	-
3	2	Kingston, .	22 96.9	5,550 00	\$261 31	5,811 31	253	-
2	3	Bridgewater, .	20 91.9	9,370 52	419 58	9,790 10	468	-



## SCHOOL RETURNS.

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1	4	Hingham, . . . . .	19 50.1	11,346 12	296 00	11,642 12	597
6	5	Lakeville, . . . . .	16 87.6	1,500 00	187 64	1,687 64	100
24	6	Abington, . . . . .	16 38.6	11,176 94	-	11,176 94	682
11	7	Plymouth, . . . . .	15 44.5	21,006 07	-	21,006 07	1,360
8	8	Marion, . . . . .	15 03.5	2,200 00	100 48	2,300 48	153
9	9	East Bridgewater, . . . . .	14 92.2	6,250 00	390 53	6,640 53	445
23	10	Mattapoisett, . . . . .	14 61.3	2,235 85	-	2,235 85	153
5	11	Brockton, . . . . .	14 55.8	66,444 60	1,119 11	67,563 71	4,641
10	12	Marshfield, . . . . .	14 55.3	3,100 00	-	3,100 00	213
7	13	Norwell, . . . . .	14 54.7	3,200 00	247 67	3,447 67	237
20	14	Hanson, . . . . .	13 71.6	2,125 00	179 42	2,304 42	168
18	15	Middleborough, . . . . .	13 53.3	11,544 38	-	11,544 38	853
12	16	Rockland, . . . . .	13 35.6	11,300 00	-	11,300 00	846
14	17	Wareham, . . . . .	13 02.6	6,500 00	-	6,500 00	499
17	18	Whitman, . . . . .	12 67.4	10,000 00	-	10,000 00	789
13	19	West Bridgewater, . . . . .	12 45.5	3,500 00	-	3,500 00	281
15	20	Scituate, . . . . .	12 28.7	5,200 00	194 30	5,394 30	439
16	21	Carver, . . . . .	12 06.1	1,650 00	110 97	1,760 97	146
25	22	Rochester, . . . . .	11 95.8	1,600 00	134 00	1,734 00	145
19	23	Hanover, . . . . .	11 27.8	3,650 00	207 20	3,857 20	342
21	24	Duxbury, . . . . .	10 76.8	3,000 00	273 64	3,273 64	304
27	25	Pembroke, . . . . .	10 55.1	1,908 77	190 97	2,099 74	199
26	26	Halifax, . . . . .	10 30.9	1,000 00	-	1,000 00	97
22	27	Plympton, . . . . .	10 00	800 00	-	800 00	80

## SUFFOLK COUNTY.

1	1	BOSTON, . . . . .	\$17 87.4	\$1,169,528 12	\$135,852 81	\$1,305,380 93	73,032
3	2	Revere, . . . . .	15 79.3	17,609 81	-	17,609 81	1,115
4	3	Chelsea, . . . . .	15 25.5	70,570 65	-	70,570 65	4,626
2	4	Winthrop, . . . . .	15 08.9	6,200 00	394 00	6,594 00	437

## WORCESTER COUNTY.

For 1890-91.	For 1891-92.	TOWNS.	Sum appropriated by towns for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
1	1	HOPEDALE,	\$20 83.7	\$4,500 99	-	\$4,500 99	216	-
2	2	Leicester,	20 07.5	6,343 86	-	6,343 86	316	-
3	3	Sterling,	19 18.8	3,511 49	-	3,511 49	183	-
4	4	Harvard,	18 57.1	2,600 00	-	2,600 00	140	-
11	5	Leominster,	17 22.4	18,119 93	-	18,119 93	1,052	-
8	6	New Braintree,	16 42.5	1,605 24	\$102 99	1,708 23	104	-
13	7	Northbridge,	15 89.1	12,288 52	392 92	12,681 44	798	-
10	8	Worcester,	15 82.4	245,020 55	-	245,020 55	15,484	-
9	9	Shrewsbury,	15 81	4,000 00	-	4,000 00	253	-
6	10	Southborough,	15 72.2	5,000 00	298 58	5,298 58	337	-
15	11	Barre,	15 37	5,050 40	298 60	5,349 00	348	-
12	12	Petersham,	15 33.9	2,103 80	166 46	2,270 26	148	-
7	13	Upton,	14 82.3	3,809 75	-	3,809 75	257	-
5	14	Uxbridge,	14 57.1	8,000 00	-	8,000 00	549	-
16	15	Leicester,	14 10.6	7,707 30	361 54	8,068 84	572	-
18	16	Westborough,	14 01.2	11,000 00	-	11,000 00	785	-
22	17	Holden,	13 87.1	6,505 59	319 06	6,824 65	492	\$175 00
37	18	Brookfield,	13 63.1	6,133 93	286 63	6,420 56	471	-
17	19	Princeton,	13 50.6	2,000 00	93 57	2,093 57	155	-
23	20	Warren,	13 40.1	11,391 00	-	11,391 00	850	-
19	21	Fitchburg,	13 33.6	54,025 70	-	54,025 70	4,051	-
24	22	Boylston,	13 33.3	1,600 00	-	1,600 00	120	-
14	23	Milford,	13 12	16,441 58	391 71	16,833 29	1,283	-
28	24	Westminster,	13 09	3,050 00	-	3,050 00	233	-
47	25	Hubbardston,	12 06.8	2,100 00	-	2,100 00	174	-
35	26	Bolton,	12 81	1,500 00	165 42	1,665 42	130	-

## SCHOOL RETURNS.

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26	Mendon, . . . . .	12 73.3	1,600 00	169 96	1,769 96	139
27	Atol, . . . . .	12 52.7	11,286 87	-	11,286 87	901
28	Northborough, . . . . .	12 29.7	3,800 00	-	3,800 00	309
29	Rutland, . . . . .	12 06.6	1,709 96	100 00	1,809 96	150
30	Grafton, . . . . .	12 03.5	11,265 40	-	11,265 40	936
31	Oxford, . . . . .	11 76.4	5,000 00	-	5,000 00	425
32	Spencer, . . . . .	11 62	22,694 96	-	22,694 96	1,953
33	West Boylston, . . . . .	11 40.6	6,000 00	-	6,000 00	526
34	West Brookfield, . . . . .	11 27.8	3,000 00	-	3,000 00	266
35	Ashburnham, . . . . .	11 23.3	3,939 00	-	3,999 00	356
36	Douglas, . . . . .	11 22.4	4,400 00	-	4,400 00	392
37	Oakham, . . . . .	10 98	750 00	150 38	900 38	82
38	Clinton, . . . . .	10 90.8	21,565 99	-	21,565 99	1,977
39	Phillipston, . . . . .	10 87.6	950 00	83 23	1,033 23	95
40	Royalston, . . . . .	10 59.3	1,500 00	194 97	1,694 97	160
41	North Brookfield, . . . . .	10 13.5	7,800 00	419 80	8,219 80	811
42	Sturbridge, . . . . .	10 05.7	3,500 00	-	3,500 00	348
43	Lunenburg, . . . . .	10 05	2,000 00	-	2,000 00	199
44	Blackstone, . . . . .	9 96.8	9,500 00	-	9,500 00	953
45	Charlton, . . . . .	9 92.9	3,097 86	-	3,097 86	312
46	Berlin, . . . . .	9 89.4	1,100 00	57 68	1,157 68	117
47	Millbury, . . . . .	9 43.3	9,000 00	-	9,000 00	954
48	Gardner, . . . . .	9 37.7	14,016 04	50 00	14,066 04	1,500
49	Templeton, . . . . .	9 12.5	5,000 00	229 00	5,229 00	573
50	Dana, . . . . .	8 70.4	700 00	92 08	792 08	91
51	Dudley, . . . . .	8 68.2	5,180 19	168 54	5,348 73	616
52	Hardwick, . . . . .	8 31	3,920 00	251 78	4,171 78	502
53	Southbridge, . . . . .	8 30.4	13,619 71	-	13,619 71	1,640
54	Sutton, . . . . .	7 47.7	4,800 00	284 55	5,084 55	680
55	Webster, . . . . .	7 20.2	9,091 76	486 91	9,578 67	1,330
56	Winchendon, . . . . .	7 19.5	5,512 02	-	5,512 02	766
57	Paxton, . . . . .	6 61.1	423 12	-	423 12	64
58	Auburn, . . . . .	6 49.8	1,800 00	-	1,800 00	277
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GRADUATED TABLES — FIRST SERIES.

*Showing the Comparative Amount of Money appropriated by the different Counties in the State for the Education of each Child between the Ages of 5 and 15 Years in the County.*

For 1890-91.	For 1891-92.	COUNTIES.	Sum appropriated by townships for each child between 5 and 15 yrs. of age.	Amount raised by taxes for the support of Schools.	Income of Funds, with Dog Tax, appropriated to Schools.	TOTAL.	No. of Children between 5 and 15 years of age.	Amount contributed for board and fuel.
2	1	Norfolk,	\$18 06.6	\$380,219 11	\$5,371 34	\$385,590 45	21,343	\$600 00
1	2	Suffolk,	17 67.6	1,263,908 58	136,246 81	1,400,155 39	79,210	-
3	3	Middlesex,	17 07.4	1,247,222 30	7,422 24	1,254,644 54	73,480	207 04
5	4	Barnstable,	16 36.2	68,894 63	2,512 92	71,407 55	4,364	100 00
4	5	Plymouth,	14 66.8	209,535 55	4,312 82	213,848 37	14,579	-
6	6	Essex,	13 52.8	668,578 12	8,243 54	676,821 66	50,028	-
8	7	Hampden,	13 08.4	310,708 50	3,426 04	314,134 54	24,009	676 00
7	8	Worcester,	13 03.7	644,992 51	5,616 36	650,608 87	49,901	341 50
9	9	Bristol,	12 67.2	429,040 51	7,356 64	436,397 15	34,436	3,071 00
11	10	Dukes,,	12 41.7	7,160 37	54 02	7,214 39	581	-
13	11	Berkshire,	11 76.5	171,449 66	3,040 00	174,489 66	14,831	-
10	12	Hampshire,	11 54.5	100,978 20	2,813 26	103,791 46	8,990	-
12	13	Franklin,	10 85.8	70,878 81	1,209 62	72,088 43	6,639	-
14	14	Nantucket,	9 80.1	5,383 44	154 20	5,537 64	565	-

AGGREGATE FOR THE STATE.

STATE, .	. . . . .	\$15 05.8	\$5,578,950 29	\$187,779 81	\$5,766,730 10	382,956	\$4,995 54
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## GRADUATED TABLES—FIRST SERIES.

*Showing the Comparative Amount of Money, including Voluntary Contributions, appropriated by the different Counties in the State, for the Education of each Child between the Ages of 5 and 15 Years in the County.*

For 1890-91.	For 1891-92.	COUNTIES.	TOTALS.
2	1	Norfolk, . . . . .	\$18 09.4
1	2	Suffolk, . . . . .	17 67.6
3	3	Middlesex, . . . . .	17 07.7
5	4	Barnstable, . . . . .	16 38.5
4	5	Plymouth, . . . . .	14 66.8
6	6	Essex, . . . . .	13 52.8
8	7	Hampden,. . . . .	13 11.2
7	8	Worcester, . . . . .	13 04.4
9	9	Bristol, . . . . .	12 76.1
11	10	Dukes, . . . . .	12 41.7
13	11	Berkshire,. . . . .	11 76.5
10	12	Hampshire, . . . . .	11 54.5
12	13	Franklin, . . . . .	10 85.8
14	14	Nantucket, . . . . .	9 80.1
STATE, . . . . .			\$15 07.1

## GRADUATED TABLES — SECOND SERIES.

The next Table exhibits the appropriation of the cities and towns, as compared with their respective valuation in 1891.

The first column shows the rank of the cities and towns in a similar Table for 1890-91, according to their valuation in 1890.

The second column indicates, in numerical order, the precedence of the cities and towns in respect to the liberality of their appropriations for 1891-2, according to their valuation in 1891.

The third consists of the names of the cities and towns, as numerically arranged.

The fourth shows the percentage of taxable property appropriated to the support of the public schools. The result is equivalent in value to mills and hundredths of mills. The decimals are carried to three figures, in order to indicate more perfectly the distinction between the different towns. The first figure (mills) expresses the principal value, and is separated from the last two figures by a dash.

The appropriations for schools are not given in the following Table, as they may be found by referring to the previous Tables; also in the Abstract of School Returns, commencing on page ii. These appropriations include the sum raised by taxes, the income of the surplus revenue, and of such other funds as the towns may appropriate at their option, either to support common schools, or to pay ordinary municipal expenses. The income of other local funds, and the voluntary contributions, are not included in the estimate. The appropriations are reckoned the same as in the first series of Tables, and for the same reasons.

The amount of taxable property, in each city and town, according to the last State valuation, is also omitted, as it is already given in the foregoing Abstract of School Returns.

If the rank assigned to towns in the next Tables is compared with the rank of the same towns in the former series, it will be seen that they hold, in many instances, a very different place in the scale.



## GRADUATED TABLES—SECOND SERIES.

[FOR THE STATE.]

*A Graduated Table in which all the Towns in the State are numerically arranged according to the Percentage of their Taxable Property appropriated to the Support of Public Schools for the Year 1891-92.*

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
24	1	FLORIDA, . . .	\$ .006-37	42	34	Clarksburg, . .	\$ .004-94
7	2	Holden, . . .	6-33	14	35	Merrimac, . .	4-94
1	3	Granville, . .	6-13	18	36	Dedham, . .	4-93
5	4	W. Stockbr'ge, .	6-08	17	37	N. Attleboro', .	4-90
16	5	Adams, . . .	6-00	71	38	Groveland, . .	4-83
6	6	Hawley, . . .	5-95	35	39	Weymouth, . .	4-81
3	7	Holbrook, . .	5-81	38	40	N. Brookfield, .	4-80
8	8	Wellfleet, . .	5-81	25	41	Grafton, . .	4-79
2	9	Heath, . . .	5-79	89	42	Sheffield, . .	4-78
4	10	Sandwich, . .	5-76	15	43	Colrain, . .	4-77
13	11	Bernardston, .	5-54	39	44	Buckland, . .	4-74
62	12	Lee, . . .	5-54	46	45	Chatham, . .	4-71
23	13	Truro, . . .	5-50	30	46	Medway, . .	4-62
22	14	Spencer, . .	5-46	44	47	Warren, . .	4-61
10	15	Wrentham, . .	5-45	81	48	Eastham, . .	4-58
28	16	Northbridge, .	5-39	48	49	Dighton, . .	4-51
12	17	Georgetown, .	5-33	73	50	E. Bridgew'r, .	4-48
26	18	Harwich, . .	5-33	101	51	Ashland, . .	4-47
19	19	Dudley, . . .	5-32	298	52	Richmond, . .	4-47
20	20	Palmer, . . .	5-31	53	53	Ludlow, . .	4-46
21	21	South Hadley, .	5-28	108	54	New Salem, .	4-43
243	22	Pelham, . . .	5-19	55	55	Foxborough, .	4-42
130	23	Easthampton, .	5-16	9	56	Randolph, . .	4-40
58	24	Rehoboth, . .	5-15	45	57	Holliston, . .	4-37
11	25	Hinsdale, . .	5-11	75	58	Avon, . .	4-36
31	26	Blandford, . .	5-07	43	59	Douglas, . .	4-33
140	27	Abington, . .	5-05	69	60	Natick, . .	4-33
32	28	Mansfield, . .	5-04	40	61	Fairhaven, . .	4-32
37	29	Dennis, . . .	5-03	154	62	Swansea, . .	4-31
33	30	North Adams, .	5-00	124	63	Littleton, . .	4-30
36	31	W. Boylston, .	4-97	59	64	Huntington, .	4-29
34	32	Brookfield, . .	4-95	84	65	Otis, . .	4-29
70	33	Belchertown, .	4-94	49	66	Marlborough, .	4-27

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
74	67	Millbury, .	\$3.004-27	176	117	Shrewsbury, .	\$3.003-86
93	68	Bradford, .	4-25	185	118	Oxford, .	3-85
51	69	N. Reading, .	4-24	111	119	Woburn, .	3-85
72	70	Templeton, .	4-24	270	120	Kingston, .	3-84
115	71	Walpole, .	4-24	120	121	W. Brookfield, .	3-84
41	72	Westford, .	4-23	136	122	Hudson, .	3-83
110	73	Windsor, .	4-23	129	123	Montgomery, .	3-83
77	74	Cheshire, .	4-21	159	124	Norfolk, .	3-82
122	75	Franklin, .	4-21	155	125	Brewster, .	3-81
87	76	Peabody, .	4-19	168	126	Hanson, .	3-81
47	77	Needham, .	4-18	94	127	Leicester, .	3-81
50	78	Longmeadow, .	4-17	231	128	Mashpee, .	3-81
105	79	Orange, .	4-15	118	129	Uxbridge, .	3-79
67	80	Orleans, .	4-15	112	130	Montague, .	3-77
56	81	Sterling, .	4-15	246	131	Pittsfield, .	3-76
66	82	Bridgewater, .	4-14	161	132	Taunton, .	3-76
294	83	Gay Head, .	4-14	147	133	Concord, .	3-75
64	84	Rockland, .	4-14	97	134	G Barrington, .	3-75
60	85	Southbridge, .	4-13	179	135	Middlefield, .	3-75
29	86	Upton, .	4-11	125	136	Phillipston, .	3-75
57	87	Norwood, .	4-09	171	137	Quincy, .	3-75
182	88	Provincetown, .	4-09	109	138	Somerset, .	3-75
65	89	Westminster, .	4-09	123	139	Halifax, .	3-73
68	90	Berkley, .	4-08	151	140	Hopkinton, .	3-73
121	91	Ayer, .	4-07	160	141	Shirley, .	3-73
114	92	Wakefield, .	4-06	104	142	Erving, .	3-72
187	93	Stoughton, .	4-05	82	143	Wareham, .	3-72
52	94	Gloucester, .	4-03	153	144	Savoy, .	3-71
61	95	Granby, .	4-03	188	145	Andover, .	3-70
92	96	Attleborough, .	4-01	127	146	Medford, .	3-70
195	97	Bourne, .	4-00	166	147	Pepperell, .	3-70
63	98	N. Andover, .	4-00	116	148	W. Springfield, .	3-70
96	99	Worthington, .	4-00	135	149	Blackstone, .	3-69
126	100	Raynham, .	3-99	190	150	Ipswich, .	3-69
76	101	Stoneham, .	3-99	203	151	Becket, .	3-68
236	102	N. Marlboro', .	3-97	144	152	Reading, .	3-68
95	103	Sutton, .	3-96	198	153	Sunderland, .	3-68
100	104	Westborough, .	3-96	194	154	Barre, .	3-67
91	105	Washington, .	3-93	158	155	Monson, .	3-67
102	106	Westhampton, .	3-93	83	156	Shutesbury, .	3-67
90	107	Ashfield, .	3-92	470	157	Charlemont, .	3-66
98	108	Ashburnham, .	3-91	145	158	Sturbridge, .	3-66
119	109	Danvers, .	3-90	103	159	Brockton, .	3-65
106	110	Hyde Park, .	3-90	157	160	Northampton, .	3-65
132	111	Petersham, .	3-90	177	161	Wayland, .	3-65
107	112	Norwell, .	3-89	258	162	Northfield, .	3-64
113	113	W. Newbury, .	3-89	150	163	Saugus, .	3-64
78	114	Wilmington, .	3-89	131	164	Westport, .	3-63
139	115	N. Braintree, .	3-88	54	165	Deerfield, .	3-62
162	116	Leominster, .	3-86	200	166	Essex, .	3-62

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
192	167	Rochester, .	\$.003-62	313	217	Rowe, .	\$.003-24
209	168	Rutland, .	3-62	259	218	Tewksbury, .	3-24
141	169	Salisbury, .	3-61	199	219	Chesterfield, .	3-23
285	170	Dover, .	3-58	263	220	Pembroke, .	3-23
169	171	Lanesborough, .	3-58	233	221	Rowley, .	3-23
173	172	Ashby, .	3-57	213	222	Mendon, .	3-22
137	173	Athol, .	3-57	303	223	Billerica, .	3-21
86	174	Auburn, .	3-56	183	224	Haverhill, .	3-21
79	175	Southborough, .	3-56	224	225	Hopedale, .	3-21
174	176	Lakeville, .	3-55	211	226	Tyngsboro', .	3-21
143	177	Plymouth, .	3-55	186	227	Melrose, .	3-20
142	178	Malden, .	3-54	220	228	Hanover, .	3-19
221	179	Methuen, .	3-54	222	229	Salem, .	3-19
134	180	Arlington, .	3-53	208	230	Middleboro', .	3-18
163	181	Norton, .	3-53	128	231	Gardner, .	3-17
230	182	Barnstable, .	3-51	212	232	Cambridge, .	3-16
156	183	Conway, .	3-50	196	233	Williamstown, .	3-16
117	184	Shelburne, .	3-49	215	234	Acton, .	3-15
133	185	Westfield, .	3-49	217	235	Revere, .	3-15
85	186	Agawam, .	3-48	223	236	Worcester, .	3-15
165	187	Williamsburg, .	3-48	244	237	Boylston, .	3-12
226	188	Enfield, .	3-47	241	238	Gill, .	3-12
164	189	Tyringham, .	3-47	247	239	Hadley, .	3-12
238	190	Tolland, .	3-45	210	240	Townsend, .	3-10
178	191	Clinton, .	3-44	251	241	Millis, .	3-09
146	192	Ware, .	3-44	225	242	Southwick, .	3-09
172	193	Winchester, .	3-44	286	243	Rockport, .	3-08
280	194	Bolton, .	3-43	138	244	Chester, .	3-07
171	195	Somerville, .	3-43	271	245	Dalton, .	3-07
80	196	Bellingham, .	3-42	202	246	Hingham, .	3-07
219	197	Brimfield, .	3-42	214	247	Plainfield, .	3-07
218	198	Sherborn, .	3-42	250	248	Canton, .	3-06
149	199	Milford, .	3-39	276	249	Whitman, .	3-06
193	200	Waltham, .	3-36	262	250	Hubbardston, .	3-05
181	201	Charlton, .	3-34	245	251	Newton, .	3-04
152	202	Marblehead, .	3-34	242	252	Lowell, .	3-03
27	203	Sandisfield, .	3-34	316	253	Fall River, .	3-01
201	204	Framingham, .	3-33	239	254	Lynn, .	3-01
261	205	Webster, .	3-33	290	255	Chicopee, .	3-00
189	206	Boxborough, .	3-32	283	256	Royalston, .	2-99
191	207	Chelsea, .	3-32	229	257	Medfield, .	2-98
184	208	Fitchburg, .	3-32	228	258	Northborough, .	2-98
205	209	Holyoke, .	3-32	253	259	Whately, .	2-98
175	210	Chelmsford, .	3-31	273	260	Dartmouth, .	2-97
240	211	Everett, .	3-30	235	261	Hardwick, .	2-97
88	212	Wilbraham, .	3-29	248	262	Maynard, .	2-97
180	213	W. Bridgewater, .	3-28	289	263	Middleton, .	2-97
206	214	Hampden, .	3-26	99	264	Leyden, .	2-96
237	215	Southampton, .	3-25	265	265	Peru, .	2-96
216	216	Monterey, .	3-24	282	266	Amesbury, .	2-93

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
306	267	Bedford, .	\$.002-91	300	310	Yarmouth, .	\$.002-36
207	268	Acushnet, .	2-89	197	311	Berlin, .	2-29
232	269	Wendell, .	2-89	305	312	Hatfield, .	2-27
255	270	Warwick, .	2-88	274	313	Amherst, .	2-26
279	271	Weston, .	2-86	330	314	Stow, .	2-23
254	272	Braintree, .	2-85	317	315	Newburyport, .	2-21
256	273	Lexington, .	2-82	307	316	Dunstable, .	2-20
301	274	Seekonk, .	2-79	320	317	Stockbridge, .	2-18
234	275	Scituate, .	2-78	319	318	Lancaster, .	2-13
268	276	Dana, .	2-75	315	319	Belmont, .	2-08
287	277	Lawrence, .	2-74	326	320	Groton, .	2-07
275	278	Springfield, .	2-73	325	321	Wellesley, .	2-02
266	279	Greenfield, .	2-72	336	322	Hamilton, .	2-00
227	280	Leverett, .	2-72	327	323	Cohasset, .	1-98
249	281	Watertown, .	2-72	324	324	Hancock, .	1-93
288	282	Harvard, .	2-71	314	325	Dracut, .	1-87
312	283	Lunenburg, .	2-71	328	326	Swampscott, .	1-86
278	284	Easton, .	2-70	333	327	Nantucket, .	1-84
284	285	New Bedford, .	2-70	329	328	Topsfield, .	1-84
318	286	Newbury, .	2-69	322	329	Lenox, .	1-82
292	287	Sudbury, .	2-69	339	330	Lynnfield, .	1-82
310	288	Wales, .	2-69	204	331	Prescott, .	1-79
267	289	Edgartown, .	2-65	334	332	Winthrop, .	1-74
272	290	Wenham, .	2-65	337	333	Chilmark, .	1-69
302	291	Carlisle, .	2-63	338	334	Greenwich, .	1-67
299	292	Carver, .	2-63	335	335	Beverly, .	1-64
281	293	Marshfield, .	2-63	341	336	Monroe, .	1-59
321	294	Burlington, .	2-62	331	337	Falmouth, .	1-58
277	295	Duxbury, .	2-62	323	338	Boston, .	1-52
252	296	Plympton, .	2-62	342	339	Alford, .	1-48
264	297	Oakham, .	2-60	340	340	Brookline, .	1-47
269	298	Winchendon, .	2-58	295	341	Paxton, .	1-47
309	299	Sharon, .	2-56	344	342	Mattapoisett, .	1-46
296	300	Freetown, .	2-55	348	343	Cottage City, .	1-39
291	301	Russell, .	2-54	343	344	Milton, .	1-39
293	302	Goshen, .	2-53	332	345	Lincoln, .	1-11
257	303	Marion, .	2-53	346	346	Mt. Wash'g'tn, .	0-98
297	304	Princeton, .	2-52	148	347	Cummington, .	0-95
311	305	Boxford, .	2-51	349	348	Hull, .	0-95
260	306	Tisbury, .	2-45	347	349	Nahant, .	0-90
304	307	Egremont, .	2-43	350	350	Manchester, .	0-69
308	308	Holland, .	2-39	351	351	Gosnold, .	0-47
345	309	New Ashford, .	2-38				

## GRADUATED TABLES—SECOND SERIES.

## [COUNTY TABLES]

*In which all the Towns in the respective Counties in the State are numerically arranged according to the Percentage of their Taxable Property appropriated for the Support of Public Schools for the Year 1891-92.*

## BARNSTABLE COUNTY.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
2	1	WELLFLEET, .	\$ .005-81	10	9	Provincetown, .	\$ .004-09
1	2	Sandwich, .	5-76	11	10	Bourne, .	4-00
3	3	Truro, .	5-50	9	11	Brewster, .	3-81
4	4	Harwich, .	5-33	13	12	Mashpee, .	3-81
5	5	Dennis, .	5 03	12	13	Barnstable, .	3-51
6	6	Chatham, .	4-71	14	14	Yarmouth, .	2-36
8	7	Eastham, .	4-58	15	15	Falmouth, .	1-58
7	8	Orleans, .	4-15				

## BERKSHIRE COUNTY.

4	1	FLORIDA, .	\$ .006-37	15	17	Savoy, .	\$ .003-71
1	2	W. Stockbr'ge, .	6-08	19	18	Becket, .	3-68
3	3	Adams, .	6-00	17	19	Lanesboro', .	3-58
8	4	Lee, .	5-54	16	20	Tyringham, .	3-47
2	5	Hinsdale, .	5-11	5	21	Sandisfield, .	3-34
6	6	North Adams, .	5-00	20	22	Monterey, .	3-24
7	7	Clarksburg, .	4-94	18	23	Williamstown, .	3-16
11	8	Sheffield, .	4-78	24	24	Dalton, .	3-07
25	9	Richmond, .	4-47	23	25	Pern, .	2-96
10	10	Otis, .	4-29	26	26	Egremont, .	2-43
14	11	Windsor, .	4-23	31	27	New Ashford, .	2-38
9	12	Cheshire, .	4-21	27	28	Stockbridge, .	2-18
21	13	N. Marlboro', .	3-97	29	29	Hancock, .	1-93
12	14	Washington, .	3-93	28	30	Lenox, .	1-82
22	15	Pittsfield, .	3-76	30	31	Alford, .	1 48
13	16	Gt. Barrington, .	3-75	32	32	Mt. Wash'gt'n, .	0-98



## BOARD OF EDUCATION.

## BRISTOL COUNTY.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
5	1	REHOBOTH, .	\$ 005-15	8	11	Somerset, .	\$ 003-75
2	2	Mansfield, .	5-04	10	12	Westport, .	3-63
1	3	N. Attleboro', .	4-90	13	13	Norton, .	3-53
4	4	Dighton, .	4-51	20	14	Fall River, .	3-01
3	5	Fairhaven, .	4-32	15	15	Dartmouth, .	2-97
11	6	Swansea, .	4-31	14	16	Acushnet, .	2-89
6	7	Berkley, .	4-08	19	17	Seekonk, .	2-79
7	8	Attleborough, .	4-01	16	18	Easton, .	2-70
9	9	Raynham, .	3-99	17	19	New Bedford, .	2-70
12	10	Taunton, .	3-76	18	20	Freetown, .	2-55

## DUKES COUNTY.

3	1	GAY HEAD, .	\$ .004-14	4	4	Chilmark, .	\$ .001-69
2	2	Edgartown, .	2-65	5	5	Cottage City, .	1-39
1	3	Tisbury, .	2-45	6	6	Gosnold, .	0-47

## ESSEX COUNTY.

1	1	GEORGETOWN, .	\$ .005-33	18	19	Salem, .	\$ .003-19
2	2	Merrimac, .	4-94	23	20	Rockport, .	3-08
5	3	Groveland, .	4-83	20	21	Lynn, .	3-01
7	4	Bradford, .	4-25	25	22	Middleton, .	2-97
6	5	Peabody, .	4-19	22	23	Amesbury, .	2-93
3	6	Gloucester, .	4-03	24	24	Lawrence, .	2-74
4	7	N. Andover, .	4-00	28	25	Newbury, .	2-69
9	8	Danvers, .	3-90	21	26	Wenham, .	2-65
8	9	W. Newbury, .	3-89	26	27	Boxford, .	2-51
14	10	Andover, .	3-70	27	28	Newburyport, .	2-21
15	11	Ipswich, .	3-69	32	29	Hamilton, .	2-00
11	12	Saugus, .	3-64	29	30	Swampscott, .	1-86
16	13	Essex, .	3-62	30	31	Topsfield, .	1-84
10	14	Salisbury, .	3-61	33	32	Lynnfield, .	1-82
17	15	Methuen, .	3-54	31	33	Beverly, .	1-64
12	16	Marblehead, .	3-34	34	34	Nahant, .	0-90
19	17	Rowley, .	3-23	35	35	Manchester, .	0-69
13	18	Haverhill, .	3-21				



## SCHOOL RETURNS.

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## FRANKLIN COUNTY.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
2	1	HAWLEY, . . .	\$ .005-95	23	14	Northfield, . .	\$ .003-64
1	2	Heath, . . .	5-79	6	15	Deerfield, . . .	3-62
3	3	Bernardston, .	5-54	15	16	Conway, . . .	3-50
4	4	Colrain, . . .	4-77	14	17	Shelburne, . .	3-49
5	5	Buckland, . . .	4-74	25	18	Rowe, . . .	3-24
12	6	New Salem, .	4-43	20	19	Gill, . . .	3-12
11	7	Orange, . . .	4-15	21	20	Whately, . . .	2-98
8	8	Ashfield, . . .	3-92	9	21	Leyden, . . .	2-96
13	9	Montague, . .	3-77	19	22	Wendell, . . .	2-89
10	10	Erving, . . .	3-72	22	23	Warwick, . . .	2-88
17	11	Sunderland, .	3-68	24	24	Greenfield, . .	2-72
7	12	Shutesbury, .	3-67	18	25	Leverett, . . .	2-72
16	13	Charlemont, .	3-66	26	26	Monroe, . . .	1-59

## HAMPDEN COUNTY.

1	1	GRANVILLE, . .	\$ .006-13	15	12	Brimfield, . . .	\$ .003-42
2	2	Palmer, . . .	5-31	13	13	Holyoke, . . .	3-32
3	3	Blandford, . .	5-07	7	14	Wilbraham, . .	3-29
5	4	Ludlow, . . .	4-46	14	15	Hampden, . . .	3-26
4	5	Longmeadow, .	4-17	16	16	Southwick, . .	3-09
9	6	Montgomery, .	3-83	11	17	Chester, . . .	3-07
8	7	W. Springfield,	3-70	19	18	Chicopee, . . .	3-00
12	8	Monson, . . .	3-67	18	19	Springfield, .	2-73
10	9	Westfield, . .	3-49	22	20	Wales, . . .	2-69
6	10	Agawam, . . .	3-48	20	21	Russell, . . .	2-54
21	11	Tolland, . . .	3-45	21	22	Holland, . . .	2-39

## HAMPSHIRE COUNTY.

1	1	SOUTH HADLEY, .	\$ .005-28	8	13	Ware, . . .	\$ .003-44
18	2	Pelham, . . .	5-19	17	14	Southampton, .	3-25
7	3	Easthampton, .	5-16	13	15	Chesterfield, .	3-23
4	4	Belchertown, .	4-94	19	16	Hadley, . . .	3-12
2	5	Huntington, . .	4-29	15	17	Plainfield, . .	3-07
3	6	Granby, . . .	4-03	21	18	Goshen, . . .	2-53
5	7	Worthington, .	4-00	22	19	Hatfield, . . .	2-27
6	8	Westhampton, .	3-93	20	20	Amherst, . . .	2-26
12	9	Middlefield, . .	3-75	14	21	Preseott, . . .	1-79
10	10	Northampton, .	3-65	23	22	Greenwich, . .	1-67
11	11	Williamsburg, .	3-48	9	23	Cummington, .	0-95
16	12	Enfield, . . .	3-47				

## MIDDLESEX COUNTY.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
8	1	ASHLAND, .	\$.004-47	30	28	Framingham, .	\$.003-33
2	2	Holliston, .	4-37	28	29	Boxborough, .	3-32
5	3	Natick, .	4-33	25	30	Chelmsford, .	3-31
12	4	Littleton, .	4-30	36	31	Everett, .	3-30
3	5	Marlborough, .	4-27	42	32	Tewksbury, .	3-24
4	6	N. Reading, .	4-24	46	33	Billerica, .	3-21
1	7	Westford, .	4-23	32	34	Tyngsboro', .	3-21
11	8	Ayer, .	4-07	27	35	Melrose, .	3-20
10	9	Wakefield, .	4-06	33	36	Cambridge, .	3-16
6	10	Stoneham, .	3-99	34	37	Acton, .	3-15
7	11	Wilmington, .	3-89	31	38	Townsend, .	3-10
9	12	Woburn, .	3-85	38	39	Newton, .	3-04
15	13	Hudson, .	3-83	37	40	Lowell, .	3-03
18	14	Concord, .	3-75	39	41	Maynard, .	2-97
19	15	Hopkinton, .	3-73	47	42	Bedford, .	2-91
20	16	Shirley, .	3-73	43	43	Weston, .	2-86
13	17	Medford, .	3-70	41	44	Lexington, .	2-82
21	18	Pepperell, .	3-70	40	45	Watertown, .	2-72
17	19	Reading, .	3-68	44	46	Sudbury, .	2-69
26	20	Wayland, .	3-65	45	47	Carlisle, .	2-63
24	21	Ashby, .	3-57	51	48	Burlington, .	2-62
16	22	Malden, .	3-54	53	49	Stow, .	2-23
14	23	Arlington, .	3-53	48	50	Dunstable, .	2-20
23	24	Winchester, .	3-44	50	51	Belmont, .	2-08
22	25	Somerville, .	3-43	52	52	Groton, .	2-07
35	26	Sherborn, .	3-42	49	53	Dracut, .	1-87
29	27	Waltham, .	3-36	54	54	Lincoln, .	1-11

## NANTUCKET COUNTY.

		NANTUCKET, . . . . .	\$.001-84
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## NORFOLK COUNTY.

1	1	HOLBROOK, .	\$.005-81	14	10	Franklin, .	\$.004-21
3	2	Wrentham, .	5-45	7	11	Needham, .	4-18
4	3	Dedham, .	4-93	9	12	Norwood, .	4-09
6	4	Weymouth, .	4-81	17	13	Stoughton, .	4-05
5	5	Medway, .	4-62	12	14	Hyde Park, .	3-90
8	6	Foxborough, .	4-42	15	15	Norfolk, .	3-82
2	7	Randolph, .	4-40	16	16	Quincy, .	3-75
10	8	Avon, .	4-36	22	17	Dover, .	3-58
13	9	Walpole, .	4-24	11	18	Bellingham, .	3-42

## NORFOLK COUNTY — CONCLUDED.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
20	19	Millis, .	\$ .003-09	24	24	Wellesley, .	\$ .002-02
19	20	Canton, .	3-06	25	25	Cohasset, .	1-98
18	21	Medfield, .	2-98	26	26	Brookline, .	1-47
21	22	Braintree, .	2-85	27	27	Milton, .	1-39
23	23	Sharon, .	2-56				

## PLYMOUTH COUNTY.

8	1	ABINGTON, .	\$ .005-05	20	15	Pembroke, .	\$ .003-23
3	2	E Bridgew'r, .	4-48	16	16	Hanover, .	3-19
2	3	Bridgewater, .	4-14	15	17	Middleboro', .	3-18
1	4	Rockland, .	4-14	14	18	Hingham, .	3-07
6	5	Norwell, .	3-89	22	19	Whitman, .	3-06
21	6	Kingston, .	3-84	17	20	Scituate, .	2-78
10	7	Hanson, .	3-81	25	21	Carver, .	2-63
7	8	Halifax, .	3-73	24	22	Marshfield, .	2-63
4	9	Wareham, .	3-72	23	23	Duxbury, .	2-62
5	10	Brockton, .	3-65	18	24	Plympton, .	2-62
13	11	Rochester, .	3-62	19	25	Marion, .	2-53
11	12	Lakeville, .	3-55	26	26	Mattapoisett, .	1-46
9	13	Plymouth, .	3-55	27	27	Hull, .	0-95
12	14	W. Bridgew'r, .	3-28				

## SUFFOLK COUNTY.

1	1	CHELSEA, .	\$ .003-32	4	3	Winthrop, .	\$ .001-74
2	2	Revere, .	3-15	3	4	Boston, .	1-52

## WORCESTER COUNTY.

1	1	HOLDEN, .	\$ .006-33	16	11	Millbury, .	\$ .004-27
3	2	Spencer, .	5-46	15	12	Templeton, .	4-24
5	3	Northbridge, .	5-39	12	13	Sterling, .	4-15
2	4	Dudley, .	5-32	13	14	Southbridge, .	4-13
8	5	W. Boylston, .	4-97	6	15	Upton, .	4-11
7	6	Brookfield, .	4-95	14	16	Westminster, .	4-09
9	7	N. Brookfield, .	4-80	20	17	Sutton, .	3-96
4	8	Grafton, .	4-79	22	18	Westborough, .	3-96
11	9	Warren, .	4-61	21	19	Ashburnham, .	3-91
10	10	Douglas, .	4-33	27	20	Petersham, .	3-90

## BOARD OF EDUCATION.

## WORCESTER COUNTY — CONCLUDED.

For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.	For 1890-91, by the State Valuation of 1890.	For 1891-92, by the State Valuation of 1891.	TOWNS.	Percentage of Valuation appropriated to Public Schools—equivalent to mills and hundredths of mills.
30	21	N. Braintree, .	3-88	37	41	Fitchburg, .	003-82
33	22	Leominster, .	3-86	42	42	Mendon, .	3-22
34	23	Shrewsbury, .	3-86	44	43	Hopedale, .	3-21
38	24	Oxford, .	3-85	26	44	Gardner, .	3-17
24	25	W. Brookfield, .	3-84	43	45	Worcester, .	3-15
19	26	Leicester, .	3-81	47	46	Boylston, .	3-12
23	27	Uxbridge, .	3-79	49	47	Hubbardston, .	3-05
25	28	Phillipston, .	3-75	54	48	Royalston, .	2-99
28	29	Blackstone, .	3-69	45	49	Northboro', .	2-98
39	30	Barre, .	3-67	46	50	Hardwick, .	2-97
31	31	Sturbridge, .	3-66	51	51	Dana, .	2-75
41	32	Rutland, .	3-62	55	52	Harvard, .	2-71
29	33	Athol, .	3-57	58	53	Lunenburg, .	2-71
18	34	Auburn, .	3-56	50	54	Oakham, .	2-60
17	35	Southborough, .	3-56	52	55	Winchendon, .	2-58
35	36	Clinton, .	3-44	57	56	Princeton, .	2-52
53	37	Bolton, .	3-43	40	57	Berlin, .	2-29
32	38	Milford, .	3-39	59	58	Lancaster, .	2-13
36	39	Charlton, .	3-34	56	59	Paxton, .	1-47
48	40	Webster, .	3-33				

## GRADUATED TABLES — SECOND SERIES.

*Showing the different Counties in the State, numerically arranged, according to the Percentage of their Taxable Property appropriated for the Support of Public Schools for the Year 1891-92.*

For 1890-91, by the State Valua- tion of 1890.	For 1891-92, by the State Valua- tion of 1891.	COUNTIES.	Percentage of Valua- tion appropriated to Public Schools— equivalent to mills and hundredths of mills.	Amount of money raised by taxes for the support of Public Schools.	Income of Surplus Revenue and other funds, including the dog tax, used at the option of the town.	TOTALS.	Valuation of 1891.	Amount contrib- uted for board and fuel.
2	1	Berkshire, . . . . .	\$.003-94	\$171,449 66	\$3,040 00	\$174,489 66	\$44,218,654	-
3	2	Hampshire, . . . . .	3-61	100,978 20	2,813 26	103,791 46	28,705,938	-
1	3	Franklin, . . . . .	3-56	70,878 81	1,209 62	72,088 43	20,222,530	-
5	4	Barnstable, . . . . .	3-52	68,894 63	2,512 92	71,407 55	20,279,416	\$100 00
4	5	Worcester, . . . . .	3-49	644,992 51	5,616 36	650,608 87	186,091,150	341 50
6	6	Plymouth, . . . . .	3-39	209,535 55	4,312 82	213,848 37	62,978,703	-
7	7	Middlesex, . . . . .	3-28	1,247,222 30	7,422 24	1,254,644 54	382,461,162	207 04
10	8	Bristol, . . . . .	3-18	429,040 51	7,356 64	436,397 15	137,065,647	3,071 00
8	9	Hampden, . . . . .	3-13	310,708 50	3,426 04	314,134 54	100,326,994	676 00
9	10	Essex, . . . . .	2-96	668,578 12	8,243 54	676,821 66	228,196,399	-
11	11	Norfolk, . . . . .	2-71	380,219 11	5,371 34	385,590 45	142,070,534	600 00
13	12	Dukes, . . . . .	1-91	7,160 37	54 02	7,214 39	3,772,691	-
14	13	Nantucket, . . . . .	1-84	5,383 44	154 20	5,537 64	3,002,227	-
12	14	Suffolk, . . . . .	1-58	1,263,908 58	136,246 81	1,400,155 39	885,650,228	-

## AGGREGATE FOR THE STATE.

STATE, . . . . .	\$.002-56	\$5,578,950 29	\$187,779 81	\$5,766,730 10	\$2,245,042,273	\$4,995 54
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## GRADUATED TABLES — SECOND SERIES.

*Showing the Arrangement of Counties according to their Appropriations, including Voluntary Contributions.*

For 1890-91, by the State Val- uation of 1890.	For 1891-92, by the State Val- uation of 1891.	COUNTIES.	Percentage of Valu- ation appropriated to Public Schools— equivalent to mills and hundredths of mills.
2	1	BERKSHIRE, . . . . .	\$.003-94
3	2	Hampshire, . . . . .	3-61
1	3	Franklin, . . . . .	3-56
5	4	Barnstable, . . . . .	3-52
4	5	Worcester, . . . . .	3-49
6	6	Plymouth, . . . . .	3-39
7	7	Middlesex, . . . . .	3-28
10	8	Bristol, . . . . .	3-20
8	9	Hampden, . . . . .	3-13
9	10	Essex, . . . . .	2-96
11	11	Norfolk, . . . . .	2-71
13	12	Dukes, . . . . .	1-91
14	13	Nantucket, . . . . .	1-84
13	14	Suffolk, . . . . .	1-58
STATE, . . . . .			\$.002-56



## GRADUATED TABLES—THIRD SERIES

The following Table exhibits the ratio of the average attendance for the year in each town to the whole number of children between 5 and 15 according to the returns.

The ratio is expressed in decimals, continued to four figures, the first two of which are separated from the last two by a point, as only the two former are essential to denote the real per cent. Yet the ratios of many towns are so nearly equal, or the difference is so small a fraction, that the first two decimals with the appropriate mathematical sign appended indicate no distinction. The continuation of the decimals, therefore, is simply to indicate a priority in cases where, without such continuation, the ratios would appear to be precisely similar.

In several cases the ratio of attendance exhibited in the Table is over 100 per cent. These results, supposing the registers to have been properly kept and the returns correctly made, are to be thus explained: The average attendance upon all Public Schools being compared with the whole number of children in the town between 5 and 15, the result may be over 100 per cent., because the attendance of children under 5 and over 15 may more than compensate for the absence of children between those ages. The rank of the towns standing highest in the following Table is in accordance with the returns. As the returns are often incorrect, the rank may be too high in some cases.

## GRADUATED TABLES—THIRD SERIES.

[FOR THE STATE.]

*In which all the Towns in the State are numerically arranged according to the AVERAGE ATTENDANCE of the Children upon the Public Schools for the year 1891-92.*

TOWNS.				TOWNS.					
	No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		
1	EGREMONT, .	52	82	1.57-30	33	Manchester, .	213	207	.97-18
2	Townsend, .	203	292	1.43-84	34	Natick, .	1,643	1,592	.96-89
3	Windsor, .	126	173	1.37-30	35	Gloucester, .	3,699	3,577	.96-70
4	Tolland, .	41	56	1.36-58	36	Upton, .	257	248	.96-49
5	Yarmouth, .	152	199	1.30-92	37	Needham, .	483	466	.96-48
6	Oakham, .	82	95	1.15-85	38	Barnstable, .	594	573	.96-46
7	Princeton, .	155	177	1.14-19	39	Ayer, .	391	377	.96-41
8	Ashfield, .	117	132	1.12-82	40	Melrose, .	1,621	1,561	.96-29
9	Becket, .	114	125	1.09-64	41	Carver, .	146	140	.95-89
10	Middlefield, .	75	79	1.05-33	42	Stockbridge, .	287	274	.95-47
11	Swampscott, .	349	364	1.04-29	43	Shutesbury, .	86	82	.95-34
12	Marblehead, .	1,057	1,098	1.03-87	44	Mansfield, .	514	490	.95-33
13	Holland, .	26	27	1.03-84	45	Frammingham, .	1,657	1,573	.94-93
14	Boxborough, .	54	56	1.03-70	46	Heath, .	105	99	.94-28
15	Granby, .	108	112	1.03-70	47	Winchester, .	924	870	.94-15
16	Southwick, .	116	120	1.03-44	48	Tyngsboro', .	84	79	.94-04
17	Wellfleet, .	165	170	1.03-03	49	Ashby, .	132	124	.93-93
18	Essex, .	222	228	1.02-70	50	Weymouth, .	1,777	1,666	.93-75
19	Mashpee, .	52	53	1.01-92	51	Acton, .	254	238	.93-70
20	Ashburnham, .	356	362	1.01-74	52	Wrentham, .	460	429	.93-26
21	Marshfield, .	213	215	1.00-93	53	Reading, .	629	586	.93-16
22	Rockland, .	846	850	1.00-47	54	Medford, .	1,904	1,773	.93-11
23	Mendon, .	139	139	1.00-00	55	Walpole, .	385	358	.92-98
24	Rutland, .	150	150	1.00-00	56	Groton, .	310	288	.92-90
25	Hubbardston, .	174	173	.99-42	57	Orange, .	780	724	.92-82
26	Westminster, .	233	231	.99-14	58	Hingham, .	597	553	.92-62
27	Randolph, .	580	575	.99-13	59	Brookfield, .	471	436	.92-56
28	Medway, .	454	445	.98-01	60	Amherst, .	644	595	.92-39
29	Sunderland, .	86	84	.97-67	61	Leominster, .	1,052	971	.92-30
30	Cohasset, .	338	330	.97-63	62	Lexington, .	450	415	.92-22
31	Enfield, .	168	164	.97-61	63	Greenfield, .	910	839	.92-19
32	Rockport, .	621	606	.97-58	64	Concord, .	634	583	.91-95

## SCHOOL RETURNS.

CXXV

TOWNS.					TOWNS.				
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
65	G Barrington,	683	728	.91-94	113	Northbridge,	798	699	87-59
66	Bridgewater,	468	430	.91-88	114	Belmont,	385	337	.87-53
67	Kingston,	253	232	.91-69	115	Cummingtown,	120	105	.87-50
68	Danvers,	1,152	1,049	.91-59	116	Weston,	223	195	.87-44
69	Bolton,	130	119	.91-53	117	Ashland,	422	368	.87-20
70	Granville,	163	149	.91-41	118	Petersham,	148	129	87-16
71	Bradford,	650	593	.91-23	119	Wakefield,	1,223	1,066	87-16
72	Holbrook,	456	416	.91-22	120	South Hadley,	696	605	.86-92
73	Warwick,	91	83	.91-20	121	Athol,	901	781	86-68
74	Hudson,	812	740	.91-13	122	Williamst'wn,	674	584	.86-64
75	Agawam,	432	393	.90-97	123	Norfolk,	162	140	.86-41
76	Buckland,	231	210	.90-90	124	Methuen,	886	764	.86-23
77	Montgomery,	33	30	.90-90	125	Falmouth,	383	330	.86-16
78	Dedham,	1,168	1,060	.90-75	126	Northboro',	309	266	86-08
79	Lynnfield,	108	98	.90-74	127	E Bridgew'r,	445	383	86-06
80	Winthrop,	437	396	.90-61	128	Beverly,	1,762	1,513	85-86
81	Groveland,	371	336	.90-56	129	Sterling,	183	157	.85-79
82	Hadley,	305	276	.90-49	130	Greenwich,	77	66	.85-71
83	Sandwich,	252	228	.90-47	131	Royalston,	160	137	.85-62
84	Abington,	682	617	.90-46	132	Pepperell,	500	428	85-60
85	N. Attleboro',	1,175	1,063	.90-46	133	Shrewsbury,	253	216	.85-37
86	Norwood,	653	587	.89-89	134	Medfield,	211	181	.85-30
87	Littleton,	178	150	.89-88	135	Winchendon,	766	653	.85-24
88	Stow,	148	133	.89-86	136	Hanson,	168	143	.85-11
89	Shelburne,	197	177	.89-84	137	Harvard,	140	119	.85-00
90	Bellingham,	206	185	.89-80	138	Marlborough,	2,272	1,930	.84-94
91	Nahant,	127	114	.89-76	139	Plainfield,	73	62	.84-93
92	Peabody,	1,870	1,677	.89-67	140	W. Springfield,	956	811	.84-83
93	Somerville,	6,800	6,091	.89-57	141	Sharon,	230	195	.84-78
94	Provincet'n,	843	753	.89-32	142	Plymouth,	1,360	1,152	.84-70
95	Monroe,	46	41	.89-31	143	Warren,	850	720	.84-70
96	Harwich,	367	327	.89-10	144	Easthampton,	801	677	.84-51
97	Dana,	91	81	.89-01	145	W. Stockb'ge,	335	283	.84-47
98	Chilmark,	36	32	.88-88	146	Middleboro',	853	720	.84-40
99	Dalton,	468	416	.88-88	147	Merrimac,	563	474	.84-19
100	Deerfield,	495	440	.88-88	148	Chesterfield,	101	85	.84-15
101	Hull,	89	79	.88-76	149	Brookline,	2,077	1,745	.84-01
102	Dennis,	458	405	.88-42	150	Lynn,	8,345	6,988	.83-73
103	Andover,	989	873	.88-27	151	Somerset,	320	267	.83-43
104	Stoneham,	954	841	.88-15	152	Leyden,	54	45	.83-33
105	Whitman,	789	695	.88-08	153	Foxborough,	467	389	.83-29
106	Conway,	243	214	.88-06	154	Brewster,	148	123	.83-10
107	Milford,	1,283	1,129	.87-99	155	N. Andover,	672	558	.83-03
108	Chelmsford,	440	387	.87-95	156	Hawley,	88	73	82-95
109	Williamsb'rg,	347	305	.87-89	157	Berlin,	117	97	82-90
110	Bourne,	253	222	.87-74	158	Northfield,	234	194	82-90
111	Hopkinton,	681	597	.87-66	159	Bedford,	146	121	82-87
112	Dighton,	259	227	.87-64	160	W. Boylston,	526	435	82-69

TOWNS.					TOWNS.				
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
161	Millis, .	132	109	.82-57	209	Abington, .	987	776	.78-62
162	Everett, .	2,173	1,793	.82-51	210	Goshen, .	51	40	.78-43
163	Leverett, .	120	99	.82-50	211	Westford, .	353	276	.78-18
164	Saugus, .	686	565	.82-36	212	Ipswich, .	737	576	.78-15
165	Prescott, .	51	42	.82-35	213	Wayland, .	392	306	.78-06
166	Westborough, .	785	646	.82-29	214	Northampton, .	2,496	1,945	.77-92
167	Charlemont, .	196	161	.82-14	215	Holden, .	492	383	.77-84
168	Huntington, .	238	195	.81-93	216	Easton, .	823	640	.77-76
169	Braintree, .	785	643	.81-91	217	Norton, .	220	171	.77-72
170	Tyringham, .	66	54	.81-81	218	Newbury, .	224	174	.77-67
171	Westfield, .	1,661	1,359	.81-81	219	Blackstone, .	953	740	.77-64
172	Taunton, .	4,258	3,479	.81-70	220	Blandford, .	170	132	.77-64
173	Milton, .	710	590	.81-69	221	Carlisle, .	85	66	.77-64
174	Eastham, .	65	53	.81-53	222	New Salem, .	125	97	.77-60
175	Brockton, .	4,641	3,779	.81-42	223	Lunenburg, .	199	154	.77-38
176	Uxbridge, .	549	447	.81-42	224	Hanover, .	342	264	.77-19
177	Maynard, .	522	425	.81-41	225	Savoy, .	92	71	.77-17
178	Malden, .	3,874	3,153	.81-38	226	Mattapoisett, .	153	118	.77-12
179	Attleborough, .	1,248	1,015	.81-33	227	N. Reading, .	147	113	.76-87
180	Tirol, .	165	134	.81-21	228	Southboro', .	337	259	.76-85
181	Lakeville, .	100	81	.81-00	229	Dartmouth, .	523	401	.76-67
182	W. Newbury, .	284	230	.80-98	230	Paxton, .	64	49	.76-56
183	Chatham, .	310	251	.80-97	231	Tisbury, .	191	146	.76-44
184	Newton, .	4,436	3,592	.80-97	232	Alford, .	38	29	.76-31
185	Wellesley, .	509	412	.80-94	233	Sherborn, .	152	116	.76-31
186	Duxbury, .	304	246	.80-92	234	Clarksburg, .	135	103	.76-29
187	Orleans, .	157	127	.80-89	235	Spencer, .	1,953	1,489	.76-24
188	Wilbraham, .	219	177	.80-82	236	Longmeadow, .	347	264	.76-08
189	Sudbury, .	197	159	.80-71	237	Fairhaven, .	451	343	.76-05
190	Leicester, .	572	461	.80-59	238	Avon, .	263	200	.76-04
191	Worthington, .	103	83	.80-58	239	Gill, .	129	98	.75-96
192	Boston, .	73032	58757	.80-45	240	Chelsea, .	4,626	3,499	.75-63
193	Hinsdale, .	335	269	.80-29	241	Halifax, .	97	73	.75-25
194	Cheshire, .	237	190	.80-16	242	Florida, .	113	85	.75-22
195	Wareham, .	499	400	.80-16	243	Pittsfield, .	3,418	2,567	.75-10
196	Gay Head, .	25	20	.80-00	244	Peru, .	36	27	.75-00
197	N. Braintree, .	104	83	.79-80	245	Plympton, .	80	60	.75-00
198	Cambridge, .	12160	9,659	.79-43	246	Lee, .	650	487	.74-92
199	Lincoln, .	160	127	.79-37	247	Templeton, .	573	439	.74-86
200	Tewksbury, .	320	254	.79-37	248	Berkley, .	151	113	.74-83
201	Montague, .	1,259	979	.79-34	249	Norwell, .	237	177	.74-68
202	Barre, .	348	276	.79-31	250	Boxford, .	142	106	.74-64
203	Grafton, .	936	740	.79-06	251	Dracut, .	335	250	.74-62
204	Sturbridge, .	348	275	.79-02	252	Salisbury, .	212	158	.74-52
205	Dover, .	104	82	.78-84	253	Swansea, .	219	163	.74-42
206	Gardner, .	1,500	1,181	.78-73	254	Belchertown, .	410	305	.74-39
207	Hopedale, .	216	170	.78-70	255	Brimfield, .	156	116	.74-35
208	Acushnet, .	136	107	.78-67	256	Adams, .	1,750	1,301	.74-34



TOWNS.					TOWNS.				
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
257	Topsfield, .	163	121	.74-23	305	Marion, .	153	102	.66-66
258	Russell, .	178	132	.74-15	306	Raynham, .	186	124	.66-66
259	Edgartown, .	150	111	.74-00	307	Franklin, .	1,011	673	.66-56
260	Lenox, .	468	346	.73-93	308	Springfield, .	7,134	4,733	.66-34
261	Hatfield, .	237	175	.73-83	309	N. Marlboro',	225	149	.66-22
262	Boylston, .	120	88	.73-33	310	Wales, .	147	97	.65-98
263	W. Brookfield, .	266	195	.73-30	311	Otis, .	111	73	.65-76
264	Seekonk, .	262	172	.73-28	312	Rowe, .	92	60	.65-21
265	Burlington, .	116	85	.73-27	313	Woburn, .	2,902	1,891	.65-12
266	Monson, .	638	467	.73-19	314	Bernardston, .	126	82	.65-07
267	Scituate, .	439	320	.73-12	315	Auburn, .	277	179	.64-62
268	Rowley, .	203	148	.72-90	316	Lanesboro', .	209	134	.64-11
269	Dunstable, .	55	40	.72-72	317	Chester, .	234	150	.64-10
270	Ludlow, .	351	255	.72-64	318	Hyde Park, .	1,920	1,221	.63-59
271	Waltham, .	2,644	1,914	.72-39	319	Clinton, .	1,977	1,254	.63-42
272	Hamilton, .	141	102	.72-34	320	Watertown, .	1,254	795	.63-39
273	Holliston, .	517	374	.72-34	321	Washington, .	100	62	.62-00
274	W. Bridgew'r, .	281	203	.72-24	322	Haverhill, .	4,610	2,845	.61-71
275	New Ashford, .	18	13	.72-22	323	Gosnold, .	13	8	.61-53
276	Palmer, .	1,179	851	.72-17	324	Cottage City, .	166	102	.61-44
277	Pelham, .	86	62	.72-09	325	Lancaster, .	316	191	.60-44
278	Wilmington, .	218	157	.72-01	326	Westport, .	380	227	.59-73
279	Colrain, .	366	263	.71-85	327	Salem, .	5,399	3,204	.59-34
280	Sandisfield, .	156	112	.71-79	328	Shirley, .	237	140	.59-07
281	Revere, .	1,115	800	.71-74	329	Ware, .	1,526	894	.58-58
282	Billerica, .	421	302	.71-73	330	Hampden, .	140	81	.57-85
283	Worcester, .	15,484	11,033	.71-25	331	Lowell, .	12,749	7,340	.57-57
284	Oxford, .	425	300	.70-58	332	New Bedford, .	7,891	4,520	.57-28
285	Richmond, .	173	122	.70-52	333	Hardwick, .	502	285	.56-77
286	Southampton, .	190	134	.70-52	334	Nantucket, .	565	320	.56-63
287	Middleton, .	164	115	.70-12	335	Lawrence, .	8,776	4,919	.56-05
288	Hancock, .	103	72	.69-90	336	Amesbury, .	1,633	911	.55-78
289	Erving, .	185	129	.69-72	337	Mt. Wash'ton, .	20	11	.55-00
290	Wendell, .	89	62	.69-66	338	Westha'pton, .	87	47	.54-02
291	Georgetown, .	390	271	.69-48	339	Newburyport, .	2,476	1,335	.53-91
292	Monterey, .	95	66	.69-47	340	Fall River, .	14,906	8,026	.53-17
293	Sheffield, .	320	222	.69-37	341	Stoughton, .	951	494	.51-94
294	Rehoboth, .	317	219	.69-08	342	Whately, .	189	98	.51-85
295	Phillipston, .	95	65	.68-42	343	N. Adams, .	3,224	1,664	.51-61
296	Pembroke, .	199	136	.68-34	344	Sutton, .	680	350	.51-47
297	Rochester, .	145	99	.68-27	345	Dudley, .	616	312	.50-64
298	Wenham, .	132	90	.68-18	346	Chicopee, .	2,544	1,284	.50-47
299	Millbury, .	954	650	.68-13	347	Southbridge, .	1,640	784	.47-80
300	Fitchburg, .	4,051	2,756	.68-03	348	Canton, .	806	379	.47-02
301	Quincy, .	4,045	2,733	.67-56	349	N. Brookfield, .	811	364	.44-88
302	Douglas, .	392	263	.67-09	350	Holyoke, .	7,144	3,072	.43-00
303	Freetown, .	197	132	.67-00	351	Webster, .	1,330	501	.37-66
304	Charlton, .	312	208	.66-66					

## GRADUATED TABLES—THIRD SERIES.

[COUNTY TABLES.]

*In which all the Towns in the respective Counties in the State are numerically arranged according to the AVERAGE ATTENDANCE of their Children upon the Public Schools for the Year 1891-92.*

[For an explanation of the principles on which the Tables are constructed, see *ante*, p. cxxiii.]

## BARNSTABLE COUNTY.

	TOWNS.	No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		TOWNS.	No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
1	YARMOUTH, .	152	199	1.30-92	9	Bourne, .	253	222	.87-74
2	Wellfleet, .	165	170	1.03-03	10	Falmouth, .	383	330	.86-16
3	Mashpee, .	52	53	1.01-92	11	Brewster, .	148	123	.83-10
4	Barnstable, .	594	573	.96-46	12	Eastham, .	65	53	.81-53
5	Sandwich, .	252	228	.90-47	13	Truro, .	165	134	.81-21
6	Provincetown, .	843	753	.89-32	14	Chatham, .	310	251	.80-97
7	Harwich, .	367	327	.89-10	15	Orleans, .	157	127	.80-89
8	Dennis, .	458	405	.88-42					

## BERKSHIRE COUNTY.

1	EGREMONT, .	52	82	1.57-30	17	Peru, .	36	27	.75-00
2	Windsor, .	126	173	1.37-30	18	Lee, .	650	487	.74-92
3	Becket, .	114	125	1.09-64	19	Adams, .	1,750	1,301	.74-34
4	Stockbridge, .	287	274	.95-47	20	Lenox, .	468	346	.73-93
5	Gt. Barringt'n, .	683	628	.91-94	21	New Ashford, .	18	13	.72-22
6	Dalton, .	468	416	.88-88	22	Sandfield, .	156	112	.71-79
7	Williamst'wn, .	674	584	.86-64	23	Richmond, .	173	122	.70-52
8	W Stockb'ge, .	335	283	.84-47	24	Hancock, .	103	72	.69-90
9	Tyringham, .	66	54	.81-81	25	Monterey, .	95	66	.69-47
10	Hinsdale, .	335	269	.80-29	26	Sheffield, .	320	222	.69-37
11	Cheshire, .	237	190	.80-16	27	N. Marlboro', .	225	149	.66-22
12	Savoy, .	92	71	.77-17	28	Otis, .	111	73	.65-76
13	Alford, .	38	29	.76-31	29	Lanesboro', .	209	134	.64-11
14	Clarksburg, .	135	103	.76-29	30	Washington, .	100	62	.62-00
15	Florida, .	113	85	.75-22	31	Mt. Wash'gt'n, .	20	11	.55-00
16	Pittsfield, .	3,418	2,567	.75-10	32	N. Adams, .	3,224	1,664	.51-61



## SCHOOL RETURNS.

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## BRISTOL COUNTY.

TOWNS.				TOWNS.					
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.		
		Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.				Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			
1	MANSFIELD, .	514	490	.95-33	11	Fairhaven, .	451	343	.76-05
2	N. Attleboro',	1,175	1,063	.90-46	12	Berkley, .	151	113	.74-83
3	Dighton, .	259	227	.87-64	13	Swansea, .	219	163	.74-42
4	Somerset, .	320	267	.83-43	14	Seekonk, .	262	172	.73-28
5	Taunton, .	4,258	3,479	.81-70	15	Rehoboth, .	317	219	.69-08
6	Attleborough,	1,248	1,015	.81-33	16	Freetown, .	197	132	.67-00
7	Acushnet, .	136	107	.78-67	17	Raynham, .	186	124	.66-66
8	Easton, .	823	640	.77-76	18	Westport, .	380	227	.59-73
9	Norton, .	220	171	.77-72	19	New Bedford,	7,891	4,520	.57-28
10	Dartmouth, .	523	401	.76-67	20	Fall River, .	14,906	8,026	.53-17

## DUKES COUNTY.

1	CHILMARK, .	36	32	.88-88	4	Edgartown, .	150	111	.74-00
2	Gay Head, .	25	20	.80-00	5	Gosnold, .	13	8	.61-53
3	Tisbury, .	191	146	.76-44	6	Cottage City,	166	102	.61-44

## ESSEX COUNTY.

1	SWAMPSCOTT, .	349	364	1 04 29	19	Saugus, .	686	565	82 36
2	Marblehead, .	1,057	1,098	1 03-87	20	W Newbury, .	284	230	80-98
3	Essex, .	222	228	1 02-70	21	Ipswich, .	737	576	.78-15
4	Rockport, .	621	606	.97-58	22	Newbury, .	224	174	.77-67
5	Manchester, .	213	207	.97-18	23	Boxford, .	142	106	.74-64
6	Gloucester, .	3,699	3,577	.96-70	24	Salisbury, .	212	158	.74-52
7	Danvers, .	1,152	1,049	.91-59	25	Topsfield, .	163	121	.74-23
8	Bradford, .	650	593	.91-23	26	Rowley, .	203	148	.72-90
9	Lynnfield, .	108	98	.90 74	27	Hamilton, .	141	102	.72-34
10	Groveland, .	371	336	.90-56	28	Middleton, .	164	115	.70 12
11	Nahant, .	127	114	.89-76	29	Georgetown, .	390	271	.69-48
12	Peabody, .	1,870	1,677	.89-67	30	Wenham, .	132	90	.68-18
13	Andover, .	989	873	.88-27	31	Haverhill, .	4,610	2,845	.61-71
14	Methuen, .	886	764	.86-23	32	Salem, .	5,399	3,204	.59-34
15	Beverly, .	1,762	1,513	.85-86	33	Lawrence, .	8,776	4,919	.56-05
16	Merrimac, .	563	474	.84-19	34	Amesbury, .	1,633	911	.55-78
17	Lynn, .	8,345	6,988	.83-73	35	Newburyport, .	2,476	1,335	.53-91
18	N. Andover, .	672	558	.83-03					



## SCHOOL RETURNS.

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## MIDDLESEX COUNTY.

	TOWNS.	No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.		TOWNS.	No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
1	TOWNSEND, .	203	292	1.43-84	28	Marlborough,	2,272	1,930	.84-94
2	Boxborough,	54	56	1.03-70	29	Bedford,	146	121	.82-87
3	Natick, .	1,643	1,592	.96-89	30	Everett,	2,173	1,793	.82-51
4	Ayer, .	391	377	.96-41	31	Maynard,	522	425	.81-41
5	Melrose, .	1,621	1,561	.96-29	32	Malden,	3,874	3,153	.81-38
6	Frammingham,	1,657	1,573	.94-93	33	Newton,	4,436	3,592	.80-97
7	Winchester, .	924	870	.94-15	34	Sudbury,	197	159	.80-71
8	Tyngsboro', .	84	79	.94-04	35	Cambridge, .	12160	9,659	.79-43
9	Ashby, .	132	124	.93-93	36	Lincoln,	160	127	.79-37
10	Acton, .	254	238	.93-70	37	Tewksbury, .	320	254	.79-37
11	Reading,	629	586	.93-16	38	Arlington,	987	776	.78-62
12	Medford, .	1,904	1,773	.93-11	39	Westford, .	353	276	.78-18
13	Groton,	310	288	.92-90	40	Wayland,	392	306	.78-06
14	Lexington,	450	415	.92-22	41	Carlisle,	85	66	.77-64
15	Concord, .	634	583	.91-95	42	N Reading, .	147	113	.76-87
16	Hudson, .	812	740	.91-13	43	Sherborn, .	152	116	.76-31
17	Littleton, .	178	160	.89-88	44	Dracut,	335	250	.74-62
18	Stow, .	148	133	.89-86	45	Burlington, .	116	85	.73-27
19	Somerville, .	6,800	6,091	.89-57	46	Dunstable, .	55	40	.72-72
20	Stoneham, .	954	841	.88-15	47	Waltham, .	2,644	1,914	.72-39
21	Chelmsford, .	440	387	.87-95	48	Holliston, .	517	374	.72-34
22	Hopkinton, .	681	597	.87-66	49	Wilmington, .	218	157	.72-01
23	Belmont, .	385	337	.87-53	50	Billerica, .	421	302	.71-73
24	Weston, .	223	195	.87-44	51	Woburn, .	2,902	1,891	.65-16
25	Ashland, .	422	368	.87-20	52	Watertown, .	1,254	795	.63-39
26	Wakefield, .	1,223	1,066	.87-16	53	Shirley, .	237	140	.59-07
27	Pepperell, .	500	428	.85-60	54	Lowell, .	12749	7,340	.57-57

NORFOLK COUNTY — CONCLUDED.

TOWNS.					TOWNS.				
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
15	Brookline, .	2,077	1,745	.84-01	22	Avon, .	263	200	76-04
16	Foxborough, .	467	389	.83 29	23	Quincy, .	4,045	2,733	.67-56
17	Millis, .	132	109	.82-57	24	Franklin, .	1,011	673	.66-56
18	Braintree, .	785	643	.81 91	25	Hyde Park, .	1,920	1,221	.63-59
19	Milton, .	710	590	.81 69	26	Stoughton, .	951	494	.51-94
20	Wellesley, .	509	412	.80-94	27	Canton, .	806	379	.47-02
21	Dover, .	104	82	.78-84					

## PLYMOUTH COUNTY.

1	MARSHFIELD, .	213	215	100-93	15	Lakeville, .	100	81	.81-00
2	Rockland, .	846	850	100-47	16	Duxbury, .	304	246	.80-92
3	Carver, .	146	140	.95-89	17	Wareham, .	499	400	.80-16
4	Hingham, .	597	553	.92-62	18	Hanover, .	342	264	.77-19
5	Bridgewater, .	468	430	.91-88	19	Mattapoisett, .	153	118	.77-12
6	Kingston, .	253	232	.91-69	20	Halifax, .	97	73	.75-25
7	Abington, .	682	617	.90-46	21	Plympton, .	80	60	.75-00
8	Hull, .	89	79	.88-76	22	Norwell, .	237	177	.74-68
9	Whitman, .	789	695	.88-08	23	Scituate, .	439	320	.73-12
10	E. Bridgew'r, .	445	383	.86-06	24	W. Bridgew'r, .	281	203	.72-34
11	Hanson, .	168	143	.85-11	25	Pembroke, .	199	136	.68-34
12	Plymouth, .	1,360	1,152	.84-70	26	Rochester, .	145	99	.68-27
13	Middleboro', .	853	720	.84-40	27	Marion, .	153	102	.66-66
14	Brockton, .	4,641	3,779	.81-42					

SUFFOLK COUNTY.

1	WINTHROP,	437	396	.90-61	3	Chelsea,	4,626	3,499	.75-63
2	Boston,	73032	58757	.80-45	4	Revere,	1,115	800	.71-74

WORCESTER COUNTY.

1	OAKHAM, .	82	95	1 15-85	7	Westminster, .	233	231	.99-14
2	Priceton, .	155	177	1.14-19	8	Upton, .	257	248	.96-49
3	Ashburnham, .	356	362	1.01-74	9	Brookfield, .	471	436	.92-56
4	Mendon, .	139	139	1 00-00	10	Leominster, .	1,052	971	.92-30
5	Rutland, .	150	150	1.00-00	11	Bolton, .	130	119	.91-53
6	Hubbardston, .	174	173	.99-42	12	Dana, .	91	81	.89-01

## SCHOOL RETURNS.

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## WORCESTER COUNTY — CONCLUDED.

TOWNS.					TOWNS.				
		No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.			No. of children between 5 and 15 years of age in each town.	Average attendance upon School.	Ratio of attendance to the whole No. of children between 5 and 15, expressed in decimals.
13	Milford, .	1,283	1,129	.87-99	37	Lunenburg, .	199	154	.77-38
14	Northbridge, .	798	699	.87-59	38	Southboro', .	337	259	.76-85
15	Petersham, .	148	129	.87-16	39	Paxton, .	64	49	.76-56
16	Athol, .	901	781	.86-68	40	Spencer, .	1,953	1,489	.76-24
17	Northboro', .	309	266	.86-08	41	Templeton, .	573	439	.74-86
18	Sterling, .	183	157	.85-79	42	Boylston, .	120	88	.73-33
19	Royalston, .	160	137	.85-62	43	W.Brookfield, .	266	195	.73-30
20	Shrewsbury, .	253	216	.85-37	44	Worcester, .	15484	11033	.71-25
21	Winchendon, .	766	653	.85-24	45	Oxford, .	425	300	.70-58
22	Harvard, .	140	119	.85-00	46	Phillipston, .	95	65	.68-42
23	Warren, .	850	720	.84-70	47	Millbury, .	954	650	.68-13
24	Berlin, .	117	97	.82-90	48	Fitchburg, .	4,051	2,756	.68-03
25	W. Boylston, .	526	435	.82-69	49	Douglas, .	392	263	.67-09
26	Westboro', .	785	646	.82-29	50	Charlton, .	312	208	.66-66
27	Uxbridge, .	549	447	.81-42	51	Auburn, .	277	179	.64-62
28	Leicester, .	572	461	.80-59	52	Clinton, .	1,977	1,254	.63-42
29	N. Braintree, .	104	83	.79-80	53	Lancaster, .	316	191	.60-44
30	Barre, .	348	276	.79-31	54	Hardwick, .	502	285	.56-77
31	Grafton, .	936	740	.79-06	55	Sutton, .	680	350	.51-47
32	Sturbridge, .	348	275	.79-02	56	Dudley, .	616	312	.50-64
33	Gardner, .	1,500	1,181	.78-73	57	Southbridge, .	1,640	784	.47-80
34	Hopedale, .	216	170	.78-70	58	N. Brookfield, .	811	364	.44-88
35	Holden, .	492	383	.77-84	59	Webster, .	1,330	501	.37-66
36	Blackstone, .	953	740	.77-64					

*Table in which all the Counties are numerically arranged, according to the AVERAGE ATTENDANCE of their Children upon the Public Schools for the Year 1891-92.*

1890-91.	1891-92.	COUNTIES.	Ratio of Attendance.
1	1	BARNSTABLE, . . . . .	.90-46
2	2	Plymouth, . . . . .	.84-18
3	3	Franklin, . . . . .	.83-82
5	4	Middlesex, . . . . .	.78-80
6	5	Hampshire, . . . . .	.78-45
4	6	Norfolk, . . . . .	.78 25
8	7	Suffolk, . . . . .	.74-17
10	8	Essex, . . . . .	.73-90
11	9	Berkshire, . . . . .	.72-77
9	10	Worcester, . . . . .	.72-72
7	11	Dukes, . . . . .	.72-11
12	12	Bristol, . . . . .	.63-59
13	13	Hampden, . . . . .	.61-46
14	14	Nantucket, . . . . .	.56-63
STATE, . . . . .			.74-06



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